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DISTRIBUTION OF HEALTH SERVICES IN THE STRUCTURE OF STATE GOVERNMENT*

CHAPTER III. TUBERCULOSIS CONTROL BY STATE AGENCIES

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This article is the third of a series* dealing with services rendered by official State agencies in relation to a number of separate problems currently recognized as having public health significance. The purpose and general plan of the study upon which these articles are based were described in the initial chapter. By way of review, it might be said briefly that during the year 1940 the United States Public Health Service conducted a survey of some thirty-five separate categories of health activity which may be carried on by any department, board, or commission of State government. The purpose of the study was to bring up to date, as of 1940, the second edition of Public Health Bulletin No. 184¹—a survey of health organization in 1930. For the current edition, an effort was made to obtain a complete, over-all picture of health service furnished at the State level by tracing each category of service through every agency rendering any part thereof. The survey was not designed to cover the sum total of services received by the public, but rather to show what the various central State organizations contribute to those services in terms of regulatory functions, financial grants-in-aid, or direct service programs. In other words, all functions financed through funds expended by State agencies are included, irrespective of whether such funds were derived from State

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Mountin, Joseph W., and Flook, Evelyn: Distribution of health services in the structure of State government. Chapter II. Communicable disease control by State agencies. Public Health Rep., 56:2233 (November 21, 1941).

Succeeding chapters will be published in subsequent issues of the PUBLIC HEALTH REPORTS.

¹ Ferrell, John A., Smillie, Wilson G., Covington, Platt W., and Meade, Pauline A.; International Division of the Rockefeller Foundation for the Conference of State and Provincial Health Authorities of North America: Health Departments of States and Provinces of the United States and Canada. Public Health Bulletin No. 184 (Revised). United States Government Printing Office, Washington, 1932.

legislative appropriations, from Federal grants, or from local contributions of the State department, board, or commission officially responsible for the respective health programs. The services performed by local agencies are not encompassed by the findings herein reported.

Tuberculosis control, like venereal disease control, was excluded from the preceding chapter which dealt with the general communicable diseases since the tuberculosis program, because of its magnitude and the special techniques involved, seemed to justify separate discussion.

AGENCIES THAT PARTICIPATE IN TUBERCULOSIS CONTROL

It was pointed out in the second article of this sequence² that the health department has major responsibility for reducing the incidence of general communicable disease. Even when other agencies of State government participate, their functions are apt to be of a subordinate nature. In contradistinction to this situation, State responsibility for tuberculosis control is characterized by dispersion rather than by concentration. The marked divergence of authority in the total State scheme for tuberculosis control results primarily from the importance of hospitalization as a factor in the complete program. Indeed, it is not uncommon for hospitalization of the tuberculous to be regarded as an entity completely separate and apart from the case-finding and other field activities incident to the problem. This situation stems from the evolution of the program. It began as a sanatorium movement under individual boards and commissions, while mass case-finding and field-control measures developed later under the auspices of public health agencies. In many places this separation has continued, often with little or no coordination.

While it is true that without exception the health department functions in some capacity for the control of tuberculosis when all ramifications of the situation are considered, in only one-fourth of the jurisdictions is it the sole official body involved. Furthermore, in States having multiple-agency programs, the extent of health department activity does not necessarily supersede that of other agencies. There is little uniformity in the manner in which responsibility is divided among the organizations concerned. In one State, activities of the several agencies may be rather evenly distributed; in the next, primary control is centered in one agency and contributions of the others are rather incidental to the main program. Moreover, activities of the several agencies may be closely correlated within one State; within another they are completely unrelated.

The purpose of this report is not to show the total amount of tuberculosis service either available to or received by inhabitants of the several States. Rather, it is proposed to feature the part played by

² See text footnote*.

the State in the total scheme designed specifically for human tuberculosis control. Activities of voluntary and local health agencies are not under discussion. Neither is any attempt made to evaluate the methods employed by any of the agencies involved.

It is recognized, of course, that a number of general measures such as broad health education procedures, nutritional programs, and steps

TABLE 1.—Official State agencies participating in the tuberculosis programs of each State and Territory, the District of Columbia, and the Virgin Islands*

State or Territory	Department of State government							
	Health	Welfare, social security, or public assistance	Tuberculosis board or commission	Board of control, department of institutions, eleemosynary board, etc.	Education	Independent State hospital or laboratory	State legislature	State university or college
Alabama	x							
Arizona	x	x				x		
Arkansas	x		x					
California	x							
Colorado	x	x						
Connecticut	x		x				x	
Delaware	x							
District of Columbia	x							x
Florida	x	x	x		x			x
Georgia	x							
Idaho*	x							
Illinois	x							
Indiana	x	x			x			x
Iowa	x			x				x
Kansas	x	x						
Kentucky	x						x	
Louisiana	x	x	x			x		
Maine*	x			x				
Maryland	x		x				x	
Massachusetts	x	x						
Michigan	x		x					
Minnesota	x	x						
Mississippi	x							
Missouri	x			x				
Montana	x			x				
Nebraska	x			x				
Nevada	x							
New Hampshire	x	x	x					
New Jersey	x			x				
New Mexico	x	x						
New York	x							
North Carolina	x		x					
North Dakota	x			x				x
Ohio	x	x						
Oklahoma	x			x				
Oregon	x			x				x
Pennsylvania	x							
Rhode Island	x						x	
South Carolina	x							
South Dakota	x			x				x
Tennessee	x				x			
Texas	x			x				
Utah	x							
Vermont	x	x						
Virginia	x				x			
Washington	x							x
West Virginia	x	x		x			x	
Wisconsin	x							x
Wyoming	x			x				
Alaska	x	x						
Hawaii	x							
Puerto Rico								x
Virgin Islands	x							x

*Eradication of tuberculosis among animals is not covered by this report.

* The department of health is really a division (Idaho) and bureau (Maine) of public health, subordinate to the department of welfare (Idaho) and the department of health and welfare (Maine).

for the prevention of silicosis all contribute to the general tuberculosis program. These, and additional pertinent activities, are given appropriate treatment in other articles of this series. For instance, eradication of tuberculosis among animals is covered under "milk control." It may be stated here, however, that all States—usually through the department of agriculture or a special livestock sanitary commission—carry out some plan for control of animal tuberculosis. Such activities have an important bearing upon human tuberculosis. Another related program is the one administered by most State departments of education for general rehabilitation of the physically handicapped. Arrested cases of tuberculosis, along with other disabled groups, are offered opportunities for vocational training under this set-up.

Table 1 is presented to acquaint the reader with the various official departments, boards, and commissions which contribute to the over-all tuberculosis service of each State and Territory, the District of Columbia, and the Virgin Islands. In addition to identifying the participating agencies for each individual State,³ this tabulation emphasizes the relative frequency with which the various organizations operate throughout the country.

CONTENT OF STATE TUBERCULOSIS PROGRAMS

As explained in the initial report,⁴ the functions of a State agency in relation to particular elements of the health program may be classified according to certain categories of service. In other words, each agency participating in any health activity utilizes one or a combination of the following approaches to the problem: "It promulgates rules and regulations; it is a law enforcing body; it furnishes promotional, supervisory, and/or consultative service to local units; it conducts educational programs; it distributes and/or administers financial grants-in-aid to local units; it renders direct service through staff members of State central and district offices." As may be expected, the several classes of service are not given equal weight in respect to each problem. For instance, in general communicable disease control the exercising of regulatory authority, promotion of immunization, and distribution of immunizing materials are predominant features of the total program. In tuberculosis control, on the other hand, paramount interest centers in operation of direct service programs. Conducting special case-finding surveys and maintaining diagnostic clinics, sanatoria, and pneumothorax stations overshadow other functions. Like-

³ The term "State" as used in the discussion which follows includes the States, the Territories, the District of Columbia, and the Virgin Islands.

⁴ See text footnote*.

wise, financial subsidy of local facilities is a more prominent measure in the eradication of tuberculosis than in many other public health performances.

Table 2 shows the frequency with which each particular phase of the State's tuberculosis program is charged to the several participating agencies. Items are listed in conformance with the standard method adopted for showing the presence or absence of State services of different categories. However, in discussion, the several functions of the various agencies will not always be treated separately nor necessarily follow the order in which they are presented in the table. Inasmuch as it is desirable to highlight certain services which are particularly significant to the problem of tuberculosis control, some items will be accorded detailed treatment while others less important may be grouped and disposed of with a few general remarks. Explanation of the code system used to identify the various governmental units concerned is found at the end of the table. The classification "Other departments of State government" covers the following agencies or offices: Hotel commission, board of vocational and adult education, office of the State treasurer, office of the Governor, and board of commissioners. They are grouped under the one heading, either because of the relative infrequency with which they operate for the control of tuberculosis or because of the minor character of their participation.

From data presented in table 2, it is apparent that certain regulatory functions are always delegated to the State health department. Un-tabulated material indicates that the reporting of tuberculosis is the specific item which is universally covered by this entry. Other laws, rules, and regulations, enforcement of which falls within this classification, pertain to restrictive measures to be observed by tuberculous patients, to conditions of employment for those having tuberculosis, and to provision for the hospitalization of various types of cases. The regulatory function of 33, 23, and 26 State health departments covers the several activities in the order mentioned. In 7 States the primary responsibility for enforcement is local, but the State agency is vested with such power in the event of failure of local authorities. Employment restrictions are usually confined to food and milk handlers and school employees—teachers, janitors, etc. In 1 State the department of education and the hotel commission, respectively, are charged with regulation of employment of these particular groups. The regulatory responsibility of all other agencies is related to determination and application of admission policies for hospitalization at State expense. In addition, 3 health departments, 4 tuberculosis commissions, 5 departments of welfare, and 7 boards of control require the patient's county or town of residence to share the cost of care in State sanatoria.

TABLE 2.—*Department of State government * responsible for specific activities designed to control tuberculosis in each State and Territory, the District of Columbia, and the Virgin Islands*

Activity	State or Territory							
	Ala-bama	Ari-zona	Arkan-sas	Calif-ornia	Colo-rado	Con-necticut	Del-a-ware	District of Co-lumbia
Promulgates and/or enforces State laws, rules, and regulations.....	1	1, 2	1, 3	1	1, 2	1, 3	1	1, 9
Promotes local programs of control.....	1	1	1	1	1	3	b 1	
Conducts educational programs:								
For the general public.....	1	1	1	1	* 1	* 3		1
For physicians.....	1							
Supervises and/or provides consultation service to local organizations.....	1	1	1	1	1	3	b 1	
Distributes and/or administers grants-in-aid:								
Subsidizes local tuberculosis clinics.....	* 1	b 1	* 1	* 1	* 1			
Subsidizes local home nursing service for tuberculosis.....				* 1	* 1			
Furnishes State-aid to local tuberculosis hospitals.....	1			1	2	7		
Furnishes money or equipment to voluntary agencies for tuberculosis control work.....								1
Operates a service program:								
Operates diagnostic clinics—								
Mobile.....	1	1	1	1				
Stationary.....	1		1			3	b 1	1
Supplies diagnosticians to assist with local clinics.....					1	3		
Does tuberculin testing of school groups.....		1			* 1		b 1	
Furnishes tuberculin free of charge—								
To local health units or voluntary agencies.....	1	1			* 1	* 3		* 1
To private physicians.....	1	1						
Provides nursing service for promotion of clinic attendance and follow-up work.....		1				3	b 1	1
Operates pneumothorax centers for nonsanatorium patients.....	1				2	3	b 1	1
Makes special studies to determine the incidence of tuberculosis in selected population groups.....	1	1		1		1	b 1	1
Provides free laboratory service for diagnosis.....	1	6	1	1	1	1	1	1
Operates tuberculosis hospitals.....		2	3			3	1	1
Supervises subsidized local tuberculosis hospitals.....	1			1	2	3		
Renders additional service not covered in this classification.....			1		1			1

See footnotes at end of table.

TABLE 2.—Department of State government * responsible for specific activities designed to control tuberculosis in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Florida	Georgia	Idaho *	Illinois	Indiana	Iowa	Kansas	Kentucky
Promulgates and/or enforces State laws, rules, and regulations.....	1, 3, 5, 9	1	1	1	1, 2	1, 4	1, 2	1
Promotes local programs of control.....	1	1	1		1	1	1	1
Conducts educational programs:								
For the general public.....	1, 2, 5	1	*1		1, 5	1	1	1
For physicians.....	1	1			1, 8	1, 8		1
Supervises and/or provides consultation service to local organizations.....	1	1	1	*1	1	1	1	1
Distributes and/or administers grants-in-aid:								
Subsidizes local tuberculosis clinics.....	1	*1	*1	*1			*1	
Subsidizes local home nursing service for tuberculosis.....		b1	*1		*1			*1
Furnishes State-aid to local tuberculosis hospitals.....			1					7
Furnishes money or equipment to voluntary agencies for tuberculosis control work.....								
Operates a service program:								
Operates diagnostic clinics—								
Mobile.....	1	1				1		1
Stationary.....		1			b 2			
Supplies diagnosticians to assist with local clinics.....			1	*1			1	
Does tuberculin testing of school groups.....	1	*1		*1	*1		1	
Furnishes tuberculin free of charge—								
To local health units or voluntary agencies.....	1	*1	1	*1		1	1	1
To private physicians.....	1					1	1	
Provides nursing service for promotion of clinic attendance and follow-up work.....	*1					1	1	
Operates pneumothorax centers for nonsanatorium patients.....	1							
Makes special studies to determine the incidence of tuberculosis in selected population groups.....	1, 2	1		1	1	1		
Provides free laboratory service for diagnosis.....	1	1	1	1	1	1, 8	1	1
Operates tuberculosis hospitals.....	3	1			2	4	2	1
Supervises subsidized local tuberculosis hospitals.....								
Renders additional service not covered in this classification.....			1			1		

See footnotes at end of table.

TABLE 2.—*Department of State government * responsible for specific activities designed to control tuberculosis in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Louisiana	Maine *	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri
Promulgates and/or enforces State laws, rules, and regulations.....	1, 2, 3, 6	1, 4	1, 3	1, 2	1, 3	1, 2	1	1, 4
Promotes local programs of control.....	1	1	1, 3	1	1	1, 2	1	1
Conducts educational programs:								
For the general public.....	1	1	1	1	1	*1	1	1
For physicians.....	1				1	1	1	
Supervises and/or provides consultation service to local organizations.....	1	1	1	1	1	1, 2	1	1
Distributes and/or administers grants-in-aid:								
Subsidizes local tuberculosis clinics.....			1					*1
Subsidizes local home nursing service for tuberculosis.....	*1						*1	
Furnishes State-aid to local tuberculosis hospitals.....		4	7	1	3	2		4
Furnishes money or equipment to voluntary agencies for tuberculosis control work.....			7					
Operates a service program:								
Operates diagnostic clinics—								
Mobile.....	1	1		1			1	*1
Stationary.....	6			1		*2	1	*4
Supplies diagnosticians to assist with local clinics.....			*3	1			1	
Does tuberculin testing of school groups.....		1		*1				*1
Furnishes tuberculin free of charge—								
To local health units or voluntary agencies.....	1	1		1	1	1		1
To private physicians.....		1		1	1	1		*1
Provides nursing service for promotion of clinic attendance and follow-up work.....		1	*1	*1		*1		1
Operates pneumothorax centers for nonsanatorium patients.....	2, *6	*4	3	*1	*3	*2		
Makes special studies to determine the incidence of tuberculosis in selected population groups.....	1	1	1	1	1	1, 2	1	
Provides free laboratory service for diagnosis.....	1	1	1	1	1	1	1	1
Operates tuberculosis hospitals.....	3, *6	4	3	1, *2	3	2	1	4
Supervises subsidized local tuberculosis hospitals.....				1	1, 3	2		4
Renders additional service not covered in this classification.....	2	1	3		1	1, 2	1	

See footnotes at end of table.

TABLE 2.—Department of State government * responsible for specific activities designed to control tuberculosis in each State and Territory, the District of Columbia, and the Virgin Islands—Continued

Activity	State or Territory							
	Mon-tana	Ne-bras-ka	Ne-vada	New Hamp-shire	New Jer-sey	New Mexi-co	New York	North Caro-lina
Promulgates and/or enforces State laws, rules, and regulations.....	1,4	1,4	1	1,3	1,4	1,2	1	1,3
Promotes local programs of control.....	• 1	1	1		4	1	1	• 3
Conducts educational programs:								
For the general public.....	• 1	1	1			1	1	• 3
For physicians.....							• 1	• 3
Supervises and/or provides consultation service to local organizations.....	• 1	• 1	1		• 4	1	1	• 3
Distributes and/or administers grants-in-aid:								
Subsidizes local tuberculosis clinics.....						• 1	• 1	
Subsidizes local home nursing service for tuberculosis.....	• 1					• 1	• 1	• 1
Furnishes State-aid to local tuberculosis hospitals.....				2	4		1	
Furnishes money or equipment to voluntary agencies for tuberculosis control work.....				1		1		
Operates a service program:								
Operates diagnostic clinics—								
Mobile.....					• 4		• 1	• 3
Stationary.....		• 4			• 4		• 1	• 3
Supplies diagnosticians to assist with local clinics.....								
Does tuberculin testing of school groups.....	• 1		1					•, • 3
Furnishes tuberculin free of charge—								
To local units or voluntary agencies.....		• 1					1	3
To private physicians.....		• 1					1	3
Provides nursing service for promotion of clinic attendance and follow-up work.....		• 1	1		• 1			
Operates pneumothorax centers for nonsanatorium patients.....					4		• 1	• 3
Makes special studies to determine the incidence of tuberculosis in selected population groups.....	1	1	1				1	• 3
Provides free laboratory service for diagnosis.....	1	1	1	1	1	1	1	1
Operates tuberculosis hospitals.....	4	4		3	4	2	1	3
Supervises subsidized local tuberculosis hospitals.....				2	4		1	
Renders additional service not covered in this classification.....	1						1	3

See footnotes at end of table.

TABLE 2.—*Department of State government* responsible for specific activities designed to control tuberculosis in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota
Promulgates and/or enforces State laws, rules, and regulations.....	1, 4	1, 2	1, 4	1, 4, 8	1	1	1	1, 4
Promotes local programs of control.....	1	1	1	1		1	b 1	1
Conducts educational programs:								
For the general public.....	1	1	1		1	1	b, e 1	1
For physicians.....							b 1	1
Supervises and/or provides consultation service to local organizations.....	e 1	e 1	1	1		1	b 1	1
Distributes and/or administers grants-in-aid:								
Subsidizes local tuberculosis clinics.....							e 1	
Subsidizes local home nursing service for tuberculosis.....		e 1	e 1				e 1	e 1
Furnishes State-aid to local tuberculosis hospitals.....						7		
Furnishes money or equipment to voluntary agencies for tuberculosis control work.....								
Operates a service program:								
Operates diagnostic clinics—								
Mobile.....			1			b 1	1	
Stationary.....			1		1	b 1	b 1	
Supplies diagnosticians to assist with local clinics.....	1	1						
Does tuberculin testing of school groups.....		e 1			e 1	e 1		e 1
Furnishes tuberculin free of charge—								
To local health units or voluntary agencies.....	1		1	e 1	1		e 1	1
To private physicians.....	1		1	e 1			e 1	e 1
Provides nursing service for promotion of clinic attendance and follow-up work.....	1				1	1		
Operates pneumothorax centers for nonsanatorium patients.....		b 2		b, e 4	1	b 1	b 1	
Makes special studies to determine the incidence of tuberculosis in selected population groups.....	1				1	1		
Provides free laboratory service for diagnosis.....	1	1	1	1	1	1	1	1, 8
Operates tuberculosis hospitals.....	4	2	4	4, 8	1	1	1	4
Supervises subsidized local tuberculosis hospitals.....								
Renders additional service not covered in this classification.....	4, 9				1			

See footnotes at end of table.

TABLE 2.—*Department of State government* responsible for specific activities designed to control tuberculosis in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory							
	Tenn- essee	Texas	Utah	Ver- mont	Vir- ginia	Wash- ington	West Vir- ginia	Wis- con- sin
Promulgates and/or enforces State laws, rules, and regulations.....	1	1, 4	1	1, 2	1	1	1, 2, 4	1
Promotes local programs of control.....	1	1	1	1	1, 5	1	1	1
Conducts educational programs:								
For the general public.....	1, 5	1	1	1	1, 5	1	1	1
For physicians.....	1	1			1	1		
Supervises and/or provides consultation service to local organizations.....	1	1	1	1	1	1	1	1
Distributes and/or administers grants-in-aid:								
Subsidizes local tuberculosis clinics.....						1		
Subsidizes local home nursing service for tuberculosis.....	•1	•1	•1			•1		
Furnishes State-aid to local tuberculosis hospitals.....	1			2	1	9	2, 7	1
Furnishes money or equipment to voluntary agencies for tuberculosis control work.....							7	
Operates a service program:								
Operates diagnostic clinics—								
Mobile.....	1	1	•1		1			
Stationary.....	1			1				
Supplies diagnosticians to assist with local clinics.....						1		
Does tuberculin testing of school groups.....	•1			1	1			•1
Furnishes tuberculin free of charge—								
To local health units or voluntary agencies.....	•1	1	•1		1		•1	1
To private physicians.....				1				•1
Provides nursing service for promotion of clinic attendance and follow-up work.....	•1			1	•1			1
Operates pneumothorax centers for nonsanatorium patients.....			•1	•2	1			
Makes special studies to determine the incidence of tuberculosis in selected population groups.....	1	1	1	1	1	1		1
Provides free laboratory service for diagnosis.....	1	1	1	1	1	1	1	1, 8
Operates tuberculosis hospitals.....		4	1	2	1		4	1
Supervises subsidized local tuberculosis hospitals.....	1				1	1		1
Renders additional service not covered in this classification.....	1			1, 2	1	1	2	1, 8, 9

See footnotes at end of table.

TABLE 2.—*Department of State government* responsible for specific activities designed to control tuberculosis in each State and Territory, the District of Columbia, and the Virgin Islands—Continued*

Activity	State or Territory				
	Wyoming	Alaska	Hawaii	Puerto Rico	Virgin Islands
Promulgates and/or enforces State laws, rules, and regulations...	1,4	1,2	1	1,9	1,9
Promotes local programs of control	1	1	1	1	
Conducts educational programs:					
For the general public	1	1	1	1	1
For physicians			1		
Supervises and/or provides consultation service to local organizations	1	1	1	1	
Distributes and/or administers grants-in-aid:					
Subsidizes local tuberculosis clinics					
Subsidizes local home nursing service for tuberculosis					
Furnishes State-aid to local tuberculosis hospitals		2	1		
Furnishes money or equipment to voluntary agencies for tuberculosis control work					
Operates a service program:					
Operates diagnostic clinics—					
Mobile		1			
Stationary			1	1	1
Supplies diagnosticians to assist with local clinics					
Does tuberculin testing of school groups	*1	1	1		
Furnishes tuberculin free of charge—					
To local health units or voluntary agencies			1	1	
To private physicians	*1	1	1		
Provides nursing service for promotion of clinic attendance and follow-up work	*1	1	1	1	
Operates pneumothorax centers for nonsanatorium patients				1	1
Makes special studies to determine the incidence of tuberculosis in selected population groups		1	1	1	
Provides free laboratory service for diagnosis	1	1	1	1	1
Operates tuberculosis hospitals	4			1	*1
Supervises subsidized local tuberculosis hospitals			1		
Renders additional service not covered in this classification					

*Code:

1. Health department
 2. Department of welfare, social security, or public assistance
 3. State tuberculosis board or commission, or single board of trustees, directors, or managers responsible for more than one State sanatorium
 4. State board of control, department of institutions, department of institutions and agencies, State board of examiners, State board of affairs, or board of charities and corrections
 5. Department of education
 6. Independent State hospital (*separate* board of trustees, directors, or managers responsible for each State sanatorium), or independent State laboratory
 7. State legislature
 8. State university or college
 9. Other departments of State government
- * The department of health is really a division (Idaho), and bureau (Maine) of public health, subordinate to the department of public welfare (Idaho) and the department of health and welfare (Maine).
- ^b Service rendered by staff of the State sanatorium which is administered by the indicated State agency.
- ^c To a limited extent—selected areas or groups only, or upon request only.
- ^d Consultation service only.
- ^e As part of grant-in-aid to local health units for general health work.
- ^f Not routinely, but as demonstrations for educational purposes.
- ^g No special tuberculosis hospital, but general hospitals which have facilities for care and treatment of tuberculous patients.

Promotional, supervisory, and advisory activities carried on at the State level represent, for the most part, health department functions. Departments of institutions and tuberculosis commissions carry on promotional programs independently of the health department in 1 and 2 States, respectively, but in all other States where promotional, supervisory, or advisory work is done by agencies other than the health department there is split responsibility for this portion of the complete plan. In 4 States no official agency engages in promotional, supervisory, or advisory measures.

Arrangement of educational programs for the general public (including school groups) represents an important activity of State health departments. In only 2 States is the tuberculosis commission entirely responsible for educational projects. When departments of education and welfare are engaged in educational work, the health department also participates. Only about one-third of the States conduct educational programs for physicians pertaining to the diagnosis and treatment of tuberculosis, but where such steps have been undertaken the health department is generally the State agency accountable.

Instead of maintaining direct service units of their own, some States choose to discharge their entire obligations for tuberculosis control by contributing financial aid to local communities for operation of facilities maintained at that level. In other jurisdictions, subsidy of local endeavors represents a supplement to service provided directly by the State agency. Four types of financial aid are granted by State departments of government to local jurisdictions. Local diagnostic clinics and home nursing services as such are subsidized directly by the health department only; this practice is followed in but 7 States. More generally, it is the policy of the State agency to finance these two items of local service through a grant-in-aid to local health units for general health work rather than for tuberculosis activities as a separate entity; about two-fifths of the States follow this procedure. Considerable variation exists, of course, in the extent to which local clinics and nursing services are subsidized within each of the States indicated. In some instances subsidy is quite limited in scope, being restricted to selected areas, while in others the policy is followed on a State-wide basis.

Provision of hospital facilities represents the chief purpose for which State agencies extend financial aid to political subdivisions or to individual institutions. There is more scattered responsibility for distribution of financial aid when support of local tuberculosis hospitals is the objective than when State funds are allotted to local field services. In all, nearly half of the States make some provision for financially aiding local tuberculosis hospitals. The health department is charged with disbursing this fund more frequently than any other State agency. Administration of the subsidy by the department of welfare is practiced by 6 jurisdictions. Another arrangement which prevails in 5 States is the making of direct grants to hospitals by the State legislature. Of the 24 States which subsidize local tuberculosis hospitals, 16 also maintain State sanatoria. The other 8 utilize local hospitals exclusively for providing hospital service partly or wholly at State expense.

Health departments, departments of welfare, or tuberculosis commissions responsible for distribution of the subsidy usually specify

that the cooperating hospitals must meet certain requirements set up by the State agency. Supervision of varying intensity is maintained. In some places, State control extends to close observation of all administrative policies and practices, approval of treatment methods, and selection of personnel of the financially aided local sanatoria; in others, it is limited to superficial periodic inspection of the physical plant or its operation. Grants made directly to local hospitals by State legislatures are practically always unconditional. Two outstanding methods obtain for the payment of subsidy; according to one plan, a flat annual sum is allotted by the State agency to selected local institutions; according to the other, the basis of contract is an agreement by the State organization to pay a certain sum per day or week for each needy patient hospitalized.

Several States operate partly through their respective State tuberculosis associations, which are voluntary organizations established to render various types of service in the field of tuberculosis control. The legislative bodies of 2 States and the health departments of 2 others give financial aid to these voluntary agencies for extension of their programs. In still another State, the health department provides the State tuberculosis association with X-ray equipment for furtherance of its case-finding work. It should be stated also that in some instances voluntary agencies contribute either money or service to the official State program. Actually, this is the more usual relationship between the official and nonofficial State agencies engaged in tuberculosis control activities. Detailed discussion of this arrangement is not included here, however, inasmuch as the present study is limited to a description of the functions of official State agencies only.

Direct service programs operated by the States for control of tuberculosis include a wide range of activities. Those most often engaged in are listed in table 2. From this tabulation one may also derive an understanding of the particular activities usually delegated to the health department, as contrasted with those less uniformly administered. Laboratory diagnosis is the only type of direct service furnished without exception by all States. The health department is the outstanding agency in affording this service.

Provision of diagnostic service through clinics maintained as stationary units or through itinerant staffs which reach a number of points within the State at varying intervals is an arrangement upon which the States are about evenly divided. Eleven of them operate fixed clinics exclusively, while in 10 only the traveling units are found. Mobile X-ray equipment is utilized for clinics of the latter classification. In 14 States both types of clinics are maintained. Service offered in connection with these chest clinics covers any combination of the following: Tuberculin testing, completion of a case history, physical examination, and X-ray examination. No diagnostic clinic

service is provided by official State agencies in the remaining jurisdictions. Greater variation exists in the agency responsible for maintenance of stationary clinics than of mobile units. Clinics of State agencies other than the health department are practically always operated in conjunction with the sanatoria which the parent organizations administer. A few health departments, likewise, follow a similar procedure. About half of the States supply direct nursing service for arrangement of clinics, promotion of attendance, and follow-up work. Furnishing tuberculosis nurses is preponderantly a health department function.

Other case-finding projects engaged in by State agencies include routine tuberculin testing of school children. However, this service is regarded as a State function in only about half of the jurisdictions under consideration. Groups which have been made the focus of special case-finding studies in one or more States are migratory laborers, mill and factory workers, contacts of reported cases and deaths, college and normal school students, inmates and employees of State institutions, and school teachers, janitors, and bus drivers. The same diagnostic methods are not employed by all States, but the most common procedure is skin testing, followed by X-ray of positive reactors. In a number of areas this procedure is being supplanted by direct X-ray examination with 35-millimeter film as a more practicable device for mass surveys. Fluoroscopy without the use of film is utilized occasionally for examination of contacts.

Probably the most striking example of divergence of authority for tuberculosis control can be found in the administration of the State sanatoria. Of the 42 States which maintain their own tuberculosis hospitals, 14 charge their health department with this function and 13 delegate the authority to a board of control, board of institutions, eleemosynary board, board of charities and corrections, or similar agency. In 8 States a tuberculosis board or commission operates the sanatorium portion of the program, while the department of welfare is responsible in 7 areas.

It will be recalled that patients hospitalized in State sanatoria operated by health departments are more apt to be accepted fully at State expense than are those entering sanatoria administered by other State agencies. A higher proportion of official bodies other than the health department require the patient or his county or town of residence to participate in defraying the cost of care. Further study of admission policies of the different State sanatoria brings to light some interesting variations. The patient as a general rule is expected to pay such portion of a fixed weekly or monthly charge as he is able, and the State, or State and county combined, bear the remainder of the expense. In 12 States, theoretically, indigent patients only are accepted. Notwithstanding, this restriction does not appear to be

rigidly followed in practice. Furthermore, even if it were, the number of persons affected would be difficult to determine because of the fact that tuberculosis patients very early fall in need of public assistance. Finally, a few States make no economic restriction—all patients are hospitalized entirely at State expense. Residential requirements range from "no restriction" to five years within a particular county of a State. The most common requirement is "State residence—length unspecified." Most States impose no restrictions for admission to hospitalization on the basis of type or stage of the disease beyond stipulating that the case must be recommended by a practicing physician or local health officer. In a few States, however, only cases showing likelihood of recovery are accepted and several others hospitalize incipient cases only.

Eight of the 10 States which do not maintain their own sanatoria give financial aid to local hospitals upon their agreement to accept medically indigent patients. In other words, all but 2 States offer, at State expense, at least some measure of hospital care for the tuberculous.

Consideration of the bed capacity of tuberculosis hospitals is not included in the present report for two reasons. First, as has been pointed out repeatedly, State facilities only are covered herein, and a count of available tuberculosis beds gives only a partial picture when restricted to those maintained under the auspices of State agencies. Second, this subject has been treated exhaustively by the American Medical Association⁵ and the National Tuberculosis Association,⁶ as well as by one of the authors (Mountin) and others in an earlier study.⁷

One of the more recent developments in the field of tuberculosis control is the operation of pneumothorax centers for nonsanatorium cases. Efficacy of this type of therapy has been demonstrated through its use in practically all modern sanatoria. However, State provision of the service for ambulatory patients is less extensively practiced. True, sanatoria of about half the jurisdictions have out-patient departments which make pneumothorax refills available to all discharged patients who wish to return at regular intervals to receive such treatment. Nevertheless, a relatively small proportion of patients apply for the service when thus offered, since only those who live within a comparatively short distance find it possible to return to the sanatorium as frequently as is necessary. Recognizing this, a few States have pioneered in the establishment of centers at numerous accessible points where ambulatory patients may receive treatment.

⁵ Tuberculosis facilities in the United States. *J. Am. Med. Assoc.*, 114:765 (March 2, 1940).

⁶ Tuberculosis Hospital and Sanatorium Directory. National Tuberculosis Association, New York, 1933.

⁷ Mountin, Joseph W., Fennell, Elliott H., and Pearson, Kay: Regional differences in hospital facilities for tuberculosis, from the standpoints of accommodations, sources of financial support, and operating costs. *Transactions of the Thirty-fifth Annual Meeting of the National Tuberculosis Association*, 1939

This service is designed for one of two purposes, either to reduce the period of disability or to lessen the likelihood of the patient's spreading his infection. The State agency functions in one of several ways in supplying this service: It periodically details staff members of the State sanatorium to stations established at local hospitals; it trains private physicians in pneumothorax technique with the proviso that they administer the treatment in local hospitals or their own offices at a nominal cost to the patient; or it trains private physicians, then pays them on a case-by-case basis for the services rendered the medically indigent. In one State approximately fifty stations have been established where needy cases are given pneumothorax refills at State expense.

Some mention should be made, perhaps, of a few activities covered by the category "Additional service not included in the above classification." Rendering consultation service to private physicians and voluntary tuberculosis organizations and interpreting X-ray films submitted by them are types of service offered by 8 health departments and 1 tuberculosis commission. Maintenance of a register of tuberculosis deaths, active cases, suspected cases, contacts, and cases discharged from sanatoria is a feature of nearly as many State programs. Another project reported by health departments fairly often is the conduct of special demonstrations in case-finding technique. Activities peculiar to 1 or 2 States each are: The provision for periodic follow-up examinations of discharged sanatorium patients, operation or subsidization of preventoriums for care of tuberculous children, engagement in special research projects in tuberculosis control, inspection and approval of all tuberculosis hospitals, irrespective of whether they receive subsidy, and inclusion of rehabilitation services exclusively for arrested cases of tuberculosis. These latter services are apart from the general vocational rehabilitation programs which are operated for various types of physically handicapped persons.

EXPENDITURES FOR TUBERCULOSIS CONTROL

Although this discussion deals with the presence or absence of specific activities for tuberculosis control rather than with the volume or adequacy of any particular service, the relative emphasis placed by the various States upon their tuberculosis programs is regarded as especially pertinent. It is impossible, of course, to determine the total cost of State services for tuberculosis, because in practically all areas some tuberculosis service is rendered under other designations. For instance, amounts charged to public health nursing, general communicable disease control, public health education, and laboratory services are all likely to cover some tuberculosis activities, volume and cost of which are immeasurable. Indeed, 19 States list no expenditure for regulatory, promotional, educational, and field diagnos-

tic services because no division within the responsible State agency is assigned exclusively to tuberculosis control. This does not mean, however, that these States make no provision for the aforementioned services; instead, in most of these 19 States the administrative and field activities are operated as part of the general communicable disease control measures, health education programs, public health nursing duties, or as one feature of sanatorium service. Actually, even the States which report earmarked funds for tuberculosis control spend additional amounts which are included under other nomenclature.

In spite of the limitations described, expenditures based on funds designated specifically for tuberculosis, when related to the extent of the problem in the several States, probably still represent the most satisfactory criterion for comparing the extent of effort of the several States toward controlling tuberculosis. This measure is susceptible to certain types of analysis which are believed to reflect true differences among the States, providing the fact is not obscured that in all States the figures reported are index rather than absolute amounts, and that they are recognized as representing minimum rather than maximum expenditures. The number of deaths from tuberculosis was chosen as an index to the extent of the problem in each State.

Approximate annual expenditures by official State agencies for tuberculosis services labeled as such range from less than \$2,000 to over \$2,000,000, with the figure for the entire country reaching nearly 25 million dollars. All funds disbursed by State agencies for designated tuberculosis activities are included, regardless of the source of such funds. State appropriations constitute the major item in the expenditure picture, of course, although they are supplemented by local contributions and Federal grants, which jointly constitute about 10 percent of the total. From the standpoint of field services alone, about one-fourth of the total amount expended is derived from Federal grants, whereas approximately 10 percent of the cost of hospitalizing tuberculous patients in State sanatoria is borne by local taxing bodies. When reduced to terms of expenditure per tuberculosis death, the range among the States extends from less than \$1.00 to over \$2,000, with \$371 as the average and \$412 as the median. (See table 3.) Sixteen States spend less than \$200 per tuberculosis death for tuberculosis service listed as such; 10 spend between \$200 and \$500; 13, from \$500 to \$1,000; and 12, more than \$1,000. Total jurisdictions studied, it will be recalled, include the 48 States, the District of Columbia, 3 Territories, and the Virgin Islands. However, 2 jurisdictions were unable to segregate funds expended for tuberculosis service from moneys allotted to other health activities.

TABLE 3.—Approximate total annual expenditures * and expenditures per tuberculosis death by all official State agencies for tuberculosis control activities designated as such in each State and Territory, the District of Columbia, and the Virgin Islands

State or Territory	Approximate total annual expenditure * for tuberculosis activities designated as such	Total deaths from tuberculosis in 1939	Approximate annual expenditure per tuberculosis death for tuberculosis activities designated as such
Total.....	\$24,906,300	67,144	\$371
Alabama.....	122,100	1,546	79
Arizona.....	73,500	892	82
Arkansas.....	648,200	994	652
California.....	751,300	3,909	192
Colorado.....	64,900	665	98
Connecticut.....	1,541,500	599	2,573
Delaware.....	197,600	155	1,275
District of Columbia.....	664,400	419	1,586
Florida.....	332,100	922	360
Georgia.....	213,400	1,514	141
Idaho.....	24,600	99	248
Illinois.....	1,600	3,630	(a)
Indiana.....	178,200	1,413	126
Iowa.....	294,100	486	605
Kansas.....	319,300	418	764
Kentucky.....	150,000	1,996	75
Louisiana.....	140,400	1,384	101
Maine.....	485,500	281	1,728
Maryland.....	723,700	1,291	561
Massachusetts.....	1,995,100	1,649	1,210
Michigan.....	2,724,600	1,906	1,429
Minnesota.....	762,700	809	943
Mississippi.....	198,200	1,080	184
Missouri.....	659,100	1,768	373
Montana.....	182,000	248	734
Nebraska.....	90,200	219	412
Nevada.....	(b)	59	(b)
New Hampshire.....	156,700	139	1,127
New Jersey.....	1,281,400	1,992	643
New Mexico.....	52,100	428	122
New York.....	1,701,800	6,482	263
North Carolina.....	459,400	1,804	255
North Dakota.....	227,700	142	1,604
Ohio.....	122,800	2,936	42
Oklahoma.....	295,200	1,076	274
Oregon.....	354,600	323	1,096
Pennsylvania.....	1,420,800	4,235	335
Rhode Island.....	462,000	296	1,737
South Carolina.....	252,000	850	296
South Dakota.....	182,900	190	963
Tennessee.....	81,400	2,326	35
Texas.....	546,200	3,911	140
Utah.....	* 78,200	95	823
Vermont.....	122,900	137	897
Virginia.....	798,300	1,617	494
Washington.....	401,500	709	566
West Virginia.....	610,900	882	693
Wisconsin.....	958,400	863	1,111
Wyoming.....	37,100	55	675
Alaska.....	8,700	299	29
Hawaii.....	469,000	277	1,693
Puerto Rico.....	306,000	4,739	65
Virgin Islands.....	(b)	20	(b)

* Expenditures for the services considered represent index rather than absolute amounts and include only expenditures allocated specifically to tuberculosis activities as such. Because of variations in fiscal practices, figures cover the most recent year for which information was available at the date of interview. In some instances estimates or appropriation figures were accepted in the absence of precise expenditure records. All funds disbursed by State agencies for designated tuberculosis activities are included regardless of the source of such funds. State-appropriated moneys are supplemented by local contributions and Federal grants, which jointly constitute about 10 percent of the total.

^a Less than \$1.00.

^b No record of expenditures for tuberculosis as a separate activity.

^c New program just getting under way. Expenditure reported represents only a fraction of a complete year.

Some explanation was sought for the wide variance in relative expenditures for State tuberculosis services. The first factor to be considered was the financial ability of the State to support service. Are expenditures for State tuberculosis work in 16 States limited to less than \$200 per tuberculosis death because these States can afford to pay no more, and are the 12 States spending more than \$1,000 doing so because they rank high in the economic scale? Investigation was made of the influence of State wealth, as expressed by per capita income payments to individuals,⁸ upon expenditures for State tuberculosis services. After States were arrayed in descending order of per capita income payments and divided into quarters, the expenditure per tuberculosis death was determined for the State occupying the median position of each quarter. Figure 1 portrays the result of this investigation and suggests that in general a State's purchasing power has a distinct bearing upon the amount expended for tuberculosis

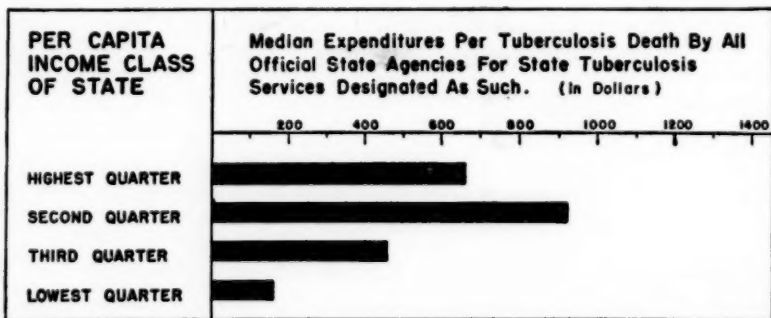


FIGURE 1.—Median expenditures per tuberculosis death by all official State agencies for tuberculosis services designated as such in States of different per capita income classes.

control, since the wealthier half of the States spend decidedly more for this purpose than do the poorer 50 percent.

Direct increase in expenditures as the wealth level rises is not always indicated, however, as some States of the top income group spend less than do those which rank next highest. With these exceptions, progression in expenditure accords with increase in wealth. Of particular interest is the extremely small amount expended by States of the lowest income bracket.

Location within a particular geographic area was the second State characteristic studied for any effect it might possibly have upon expenditures for State tuberculosis services as related to the problem in each jurisdiction. Four broad geographic areas (Northeastern, Southern, Central, and Western) previously established for analysis

⁸ Martin, John L., National Income Division, Department of Commerce: Income Payments to Individuals by States, 1929-39. Survey of Current Business, October 1940.

of public health data ⁹ were used as a basis for analyzing the influence of a State's location upon its expenditure for control of tuberculosis. "The area described as Northeastern embraces all States from Maine to Ohio and the Virginias. Beginning with Virginia and West Virginia, the Southern region stretches across the lower half of the country through Texas and Oklahoma, including, in the main, Gulf States and the tier adjacent to them. The Central area, in turn, is composed of the upper portion of the country which lies west of the Ohio River and east of the Rocky Mountains. Both mountain and Pacific States constitute the fourth section, the Western." Figure 2

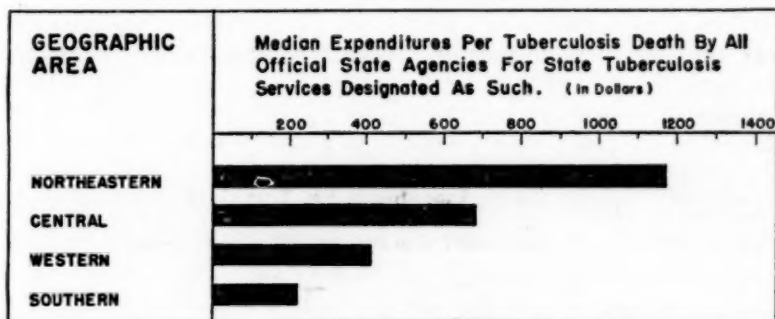


FIGURE 2.—Median expenditures per tuberculosis death by all official State agencies for tuberculosis services designated as such in States of different geographic areas.

reveals marked differences among the several geographic areas in the amounts recorded as expenditures for State tuberculosis services. That these differences might be emphasized, the normal order of presenting the several geographic sections has been abandoned in favor of arrangement by gradual diminution in expenditures. The figure representing the median expenditure of States of the Northeastern region is more than five times as high as the corresponding figure for those of the Southern area. States of the Central and Western sections occupy positions between the Northeastern and Southern extremes, those in the central part of the country making

⁹ Mountin, Joseph W., Pennell, Elliott H., and Pearson, Kay: The distribution of hospitals and their financial support in southern States. *Southern Medical Journal*, Vol. 33, No. 4, April 1940.

The established geographic areas with the States contained therein are as follows:

Northeastern: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia.

Southern: Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Central: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

Western: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

appreciably higher expenditures than those in the western. These differences, in the main, are likely to represent the economic position of the several geographic groups rather than their concern for tuberculosis. Seven States of the Northeastern area also rank among the wealthiest quarter, while 10 of the Southern States are found in the lowest income level.

By way of brief summary, it might be stated that certain State characteristics, namely, wealth and geographic position, contribute quite noticeably to variation among the States in their expenditures for tuberculosis services. It is recognized, of course, that there is some measure of relationship between the two factors.

DISTRIBUTION OF EXPENDITURES ACCORDING TO TYPE OF SERVICE

As might be expected, a very high proportion of the total expenditure reported for tuberculosis work is charged to hospitalization with relatively little—less than 5 percent for the country as a whole—to field activities. Table 4 shows, however, that the same situation does not obtain for all jurisdictions. Whereas 19 States make no report of separate funds expended for field services, this feature of the program accounts for more than 20 percent of the total bill in 5 other States. One circumstance which undoubtedly determines, to a small extent at least, the diverse distribution of expenditures according to purpose is the fact that no record is available of the portion of expenditures for general health work which might be charged to tuberculosis field service. Table 4 further reveals that when all States are considered, more than twice as much money is expended for maintenance and operation of State-owned tuberculosis hospitals as for State aid to local sanatoria.

Considerable variation exists among the States in this splitting of total hospital expenses between the maintenance and operation of State sanatoria and the subsidy of local sanatoria. It will be recalled that 2 jurisdictions make no provision for hospitalization of the tuberculous, 1 has no special tuberculosis hospital but operates general hospitals which have facilities for care and treatment of tuberculous patients, 26 utilize State sanatoria exclusively, 8 have no State hospital facilities, but rely upon subsidy of local institutions to meet the State's responsibility in this matter, while both methods are employed by the remaining 16 States. The differences among these latter 16 States present a most interesting study. In 12 of them maintenance and operation of State sanatoria represents the major expenditure item and accounts for anywhere from slightly more than half to nearly all of the cost of the two types of hospital service. In the other 4, the situation is reversed, State subsidy of local sanatoria outweighing the sums expended for the State tuberculosis hospitals.

TABLE 4.—Approximate total annual expenditures * by all official State agencies for tuberculosis activities designated as such and percentage distribution of those expenditures according to type of service rendered in each State and Territory, the District of Columbia, and the Virgin Islands

State or Territory	Approximate total annual expenditure* for tuberculosis activities designated as such	Percent of approximate total annual expenditure* allocated to specified type of service		
		Field control	Maintenance and operation of State sanatoria	State subsidy of local sanatoria
Total.....	\$24,906,300	4.1	68.4	27.5
Alabama.....	122,100	38.6	.....	61.4
Arizona.....	73,500	9.4	90.6	.....
Arkansas.....	648,200	1.8	98.2	.....
California.....	751,300	2.6	.....	97.4
Colorado.....	64,900	23.0	.....	77.0
Connecticut.....	1,541,500	2.8	94.6	2.6
Delaware.....	197,600	(*)	100.0	.....
District of Columbia.....	664,400	5.6	94.4	.....
Florida.....	332,100	5.6	94.4	.....
Georgia.....	213,400	16.6	83.4	.....
Idaho.....	24,600	11.8	.....	88.2
Illinois.....	1,600	100.0	.....	.....
Indiana.....	178,200	(*)	100.0	.....
Iowa.....	294,100	10.5	89.5	.....
Kansas.....	319,300	2.8	97.2	.....
Kentucky.....	150,000	3.1	75.7	21.2
Louisiana.....	140,400	13.4	86.6	.....
Maine.....	485,500	(*)	88.9	11.1
Maryland.....	723,700	20.0	69.5	10.5
Massachusetts.....	1,995,100	5.7	70.1	24.2
Michigan.....	2,724,600	0.1	17.3	82.6
Minnesota.....	762,700	1.9	41.0	57.1
Mississippi.....	108,200	5.3	94.7	.....
Missouri.....	659,100	(*)	87.8	12.2
Montana.....	182,000	(*)	100.0	.....
Nebraska.....	90,200	14.0	86.0	.....
Nevada.....	(*)	(*)	.....	.....
New Hampshire.....	156,700	(*)	54.8	45.2
New Jersey.....	1,281,400	1.2	35.3	63.5
New Mexico.....	52,100	(*)	100.0	.....
New York.....	1,701,800	3.9	96.1	(*)
North Carolina.....	459,400	(b)	100.0	.....
North Dakota.....	227,700	(*)	100.0	.....
Ohio.....	122,800	(*)	100.0	.....
Oklahoma.....	295,200	3.0	97.0	.....
Oregon.....	334,600	(*)	100.0	.....
Pennsylvania.....	1,420,800	5.4	94.6	.....
Rhode Island.....	462,000	(*)	96.8	3.2
South Carolina.....	252,000	(*)	100.0	.....
South Dakota.....	182,900	(*)	100.0	.....
Tennessee.....	81,400	87.7	.....	* 12.3
Texas.....	546,200	3.0	97.0	.....
Utah.....	* 78,200	(*)	100.0	.....
Vermont.....	122,900	6.4	93.6	(b)
Virginia.....	798,300	9.4	84.3	6.3
Washington.....	401,500	0.4	.....	99.6
West Virginia.....	610,900	1.6	94.5	3.9
Wisconsin.....	958,400	(*)	27.5	72.5
Wyoming.....	37,100	(*)	100.0	.....
Alaska.....	8,700	100.0	.....	(*)
Hawaii.....	469,000	4.1	.....	95.9
Puerto Rico.....	306,000	9.4	90.6	.....
Virgin Islands.....	(*)	(*)	(d)	.....

* Expenditures for the services considered represent index rather than absolute amounts and include only expenditures allocated specifically to tuberculosis activities as such. Because of variations in fiscal practices, figures cover the most recent year for which information was available at the date of interview. In some instances estimates or appropriation figures were accepted in the absence of precise expenditure records. All funds disbursed by State agencies for designated tuberculosis activities are included regardless of the source of such funds. State appropriations constitute the major item, but about one-fourth of the amount expended for field services is derived from Federal grants, whereas approximately 10 percent of the cost of hospitalizing tuberculous patients in State sanatoria is borne by local taxing bodies.

* No record of expenditures for tuberculosis as a separate activity.

^b Included in the figure reported for State sanatoria.

* New program just getting under way. Expenditure reported represents only a fraction of a complete year.

^d No special tuberculosis hospital, but general hospitals which have facilities for care and treatment of tuberculous patients.

State programs for all three types of service, field control, maintenance of State sanatoria, and State subsidy of local sanatoria, are probably more strongly influenced by complementary programs at the local level than by any single factor. Yet, as stated previously, consideration of the actual extent of locally provided services is not

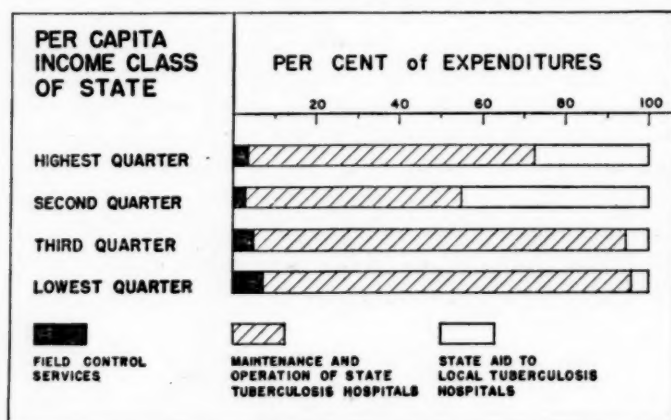


FIGURE 3.—Percentage of total expenditures for State tuberculosis services designated as such which are allotted to the indicated type of activities in States of different per capita income classes.

encompassed by the present study. Other determinants of the type of service receiving most emphasis are a State's wealth and its location. Figures 3 and 4 picture the effect of these characteristics.

From the data presented in figure 3 it is obvious that States lowest in the gradations of wealth devote a considerably higher portion of their total expenditures to field control activities than do those of the upper limits. Obviously, an inverse proportion is allotted to hospital service in the several groups of States. At the same time, there appears to be direct association between State wealth and the method of

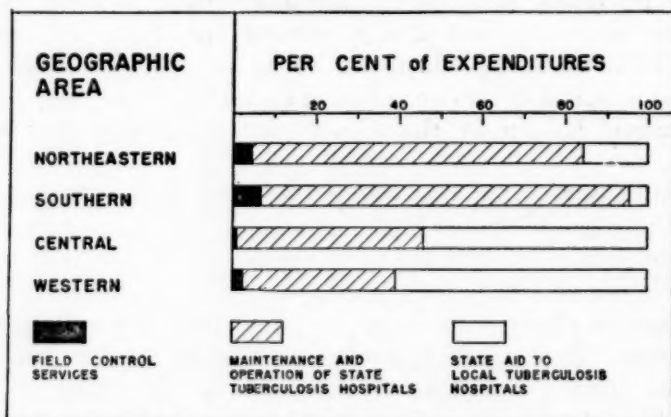


FIGURE 4.—Percentage of total expenditures for State tuberculosis services designated as such which are allotted to the indicated type of activities in States of different geographic areas.

arranging for hospitalization. State subsidy of local tuberculosis hospitals is a more important feature of the tuberculosis program of States in the upper half of the per capita income scale than in those of the lower.

According to figure 4, when States are grouped by major geographic divisions, it becomes apparent that those of the southern portion of the country designate relatively more of their aggregate tuberculosis expenditures for field work than do States of any other geographic section. Insofar as the means of providing hospitalization is concerned, State subsidy of local sanatoria is a much more common practice in the Central and Western areas than in the remainder of the country. It should be noted, however, that even though a relatively small fraction of the total is expended for this purpose in the Northeastern region as a whole, more individual States of that area than of any other utilize this arrangement in small measure.

DISCUSSION

In commenting upon the findings of a survey of tuberculosis services provided by official State agencies, it must be emphasized, first, that tuberculosis programs carried on at the State level differ widely in policy and content. State programs may include any one or any combination of the following functions: Regulatory authority, promotional and educational activity, advisory and supervisory assistance to local units, financial subsidy of local tuberculosis work, or provision of direct State service. Furthermore, extreme variation characterizes the type of direct service provided. Dissimilarity is noted in methods and policies for: Operating diagnostic clinics; furnishing diagnosticians to assist with local clinics; arranging for tuberculin testing of school children or merely distributing the testing material; providing facilities for pneumothorax treatment of non-sanatorium patients; and finally, maintaining State sanatoria or utilizing local sanatoria which are subsidized by the State. The extent and intensity of service provided at the State level may possibly be determined largely by the type of complementary local service available.

Probably the most striking single disclosure of the entire study is the multiplicity of official State agencies which participate in the various tuberculosis programs under consideration. The Nation-wide, over-all picture of activities for tuberculosis control, as carried on by official agencies of the State, includes the contribution of some dozen-odd agencies. In many instances the variety of agencies represents little more than a difference in terminology. In others, however, there is sharp distinction with respect to scheme of organization and method of operation. In about half of the States two agencies parti-

cipate in tuberculosis activities; single-agency and triple-agency programs are found in 13 and 9 States, respectively; and occasionally there are State programs administered by four or even five governmental units. The difficulties encountered in planning a unified and balanced program under such circumstances are not hard to imagine. Little uniformity is found in division of labor among the multiple participating departments. In reality, efforts of the several official organizations working within a single State are often completely unrelated. Lack of coordination between the hospital program and field activities when delegated to two separate agencies is an outstanding example of this situation. Even within the hospital program alone there is divided control in certain States. In States which both operate State sanatoria and financially aid those under local control it is not unusual to find one department operating the State sanatoria while another administers the financial aid allotted to local hospitals.

Complete expenditure figures for State tuberculosis services are difficult if not impossible to determine because of the interrelationship of other activities. The approximate expenditures on services designated for tuberculosis total nearly 25 million dollars, and average somewhat less than \$400 per tuberculosis death for the Nation as a whole. These expenditures bear a direct relationship to the buying power and geographic position of the individual States.

Poorer States allot a larger proportion of their total expenditures to field service than do the wealthy ones, probably because they find it difficult to finance hospitalization with any degree of adequacy, this being the most expensive item in the complete tuberculosis program. There are also geographic differences in both the content and the intensity of the tuberculosis programs but it so happens that geographic groupings of States partially coincide with groupings based on economic consideration.

In brief, for one reason or another, not only the organization and operation of State programs for tuberculosis control but also the financial support thereof is characterized by extreme diversity of pattern.

THE PIGMENT OF THE MALARIA PARASITE¹

By DEMPSIE B. MORRISON and WILLIAM A. D. ANDERSON

As the malaria parasite develops within an intact erythrocyte, the hemoglobin diminishes and a granular pigment appears which is red-brown by transmitted light and gray-black by reflected light. In an extensive literature dealing with this pigment (cf., review by Sinton and Ghosh (1)), it has been characterized variously as melanin, hematin, a hematin complex, and a hematin derivative.

¹ From the Departments of Chemistry and Pathology, University of Tennessee College of Medicine, Memphis. Received for publication July 23, 1941.

Carbone (2), Ascoli (3), and Brown (4) prepared extracts of malaria pigment from tissues and identified the pigment, spectroscopically, as hematin. However, the extracts were admittedly crude and the methods of extraction did not preclude the possibility that hematin had been liberated from some preexisting complex. Sinton and Ghosh (1) appear to have been the first to isolate malaria parasites in quantity in pure state. From *Plasmodium knowlesi*, obtained from the blood of heavily infected monkeys, they prepared relatively large quantities of pigment presumably in unaltered form. Extensive chemical and physical tests, which included spectrophotometric analyses, identified the pigment as free hematin.

Fairley and Bromfield (5) have described a brown extracorporeal and extraparasite pigment in the plasma of a patient with blackwater fever, for which they suggest the name "pseudomethemoglobin", since spectroscopic tests demonstrated its similarity to but not identity with methemoglobin. Further study of the pigment suggested that it was a compound of hematin and plasma albumin, and Fairley (6) renamed the compound "methemalbumin."

In consideration of such diverse opinion we have undertaken to reinvestigate the problem of the chemical identity of the malaria pigment, preliminary to a study² of its possible role in the malaria syndrome. Our observations support the opinion of Sinton and Ghosh that the pigment as it exists in the plasmodium of malaria is free hematin.³

METHODS AND PROCEDURE

The source of parasite material was blood from monkeys (*Macacus rhesus*) infected with *Plasmodium knowlesi* (Rockefeller strain). In some cases the terminal infection was as high as 75 percent of total erythrocytes. The animals were bled under nembutal anesthesia by cannulation of the femoral artery, or by syringe directly from the heart when the animal had collapsed and died or was dying. Dry potassium oxalate was used as anticoagulant, and analyses were made as soon as possible after blood was obtained.

Blood samples were centrifuged in graduated tubes, plasma removed, and distilled water added to lysis the cells and release the parasites. The parasites swell but do not disintegrate in distilled water. The parasite mass was washed repeatedly on the centrifuge with distilled water until hemoglobin or other soluble pigment could no longer be detected by the spectroscope in the wash water.

The presence in the parasites of a pigment containing iron protoporphyrin was demonstrated by preparing hemin crystals and reduced pyridine hemochromogen directly from portions of the parasite mass.

² In press.

³ Hereafter hematin will be called ferrihemic acid, as proposed by Morrison and Williams (7).

Evidence that the pigment exists in the parasite as preformed ferrihemic acid (hematin) is furnished by dissolving the pigment from the parasite mass with 0.5 N sodium carbonate solution and demonstrating the identity of its spectrophotometric curve with that of a solution of recrystallized hemin in 0.5 N sodium carbonate. We have confirmed the observation by Sinton and Ghosh (1) that 0.5 sodium carbonate does not denature or otherwise alter hemoglobin within the time required for solution by this solvent of pigment from the parasite.

All pigment analyses were made with the Bausch and Lomb universal spectrophotometer, with an assembly of cups which permitted readings with the following depths of solution: 1, 2.5, 5, 10, 20, 50, and 100 mm. Thus, any portion of the spectral regions covered, 500 to 700 $m\mu$, could be examined under optimal conditions.

RESULTS AND CONCLUSIONS

In figure 1, curves 1 and 2 represent spectrophotometric analyses of 0.5 N sodium carbonate solutions of parasite pigment and recrystallized hemin, respectively. The curves are identical except for concentration differences.

Of the spectrophotometric curves in figure 2, curve 2 is for an acid-acetone solution of pigment from hemoglobin-free parasites, and curve 1 represents an acid-acetone solution of ferrihemic acid prepared from parasite-free hemoglobin of the same blood. Again the two curves are identical except for differences in concentrations. Curve 3 of this figure describes an acid-acetone extract of the spleen of an infected monkey. This represents approximately 17.5 times the quantity of ferrihemic acid which can be obtained from the hemoglobin present in the spleen of a normal monkey.

SUMMARY

Malaria parasites (*Plasmodium knowlesi*) contain a pigment which yields hemin crystals and reduced pyridine hemochromogen. When the pigment is extracted from the parasites under conditions which do not affect the spectral characteristics of hemoglobin, it is identifiable spectrophotometrically as ferrihemic acid (hematin).

ACKNOWLEDGMENT

The study and observations on which this paper is based were aided by a grant from the Tennessee Valley Authority through the Department of Preventive Medicine of the University of Tennessee.

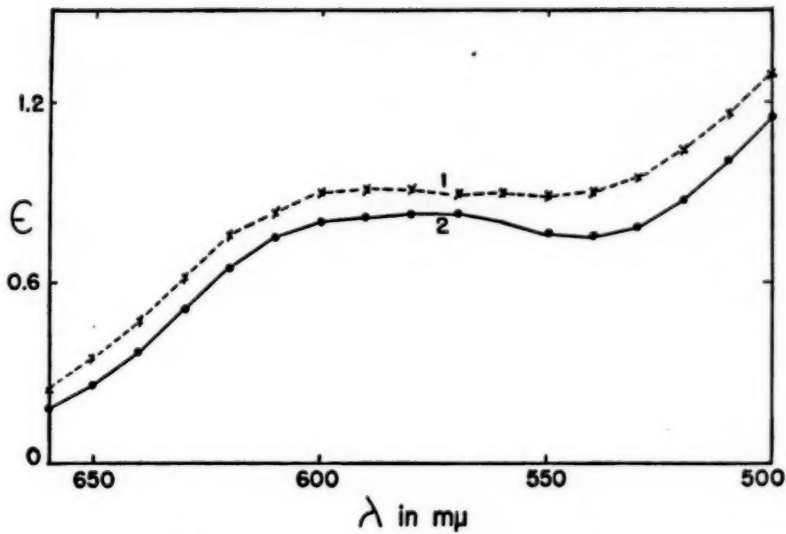


FIGURE 1.—Spectrophotometric curves, 1 cm. cup, of hemoglobin-free parasite pigment (curve 1) and recrystallized hemin in the same solvent (curve 2), in 0.5 N Na_2CO_3 .

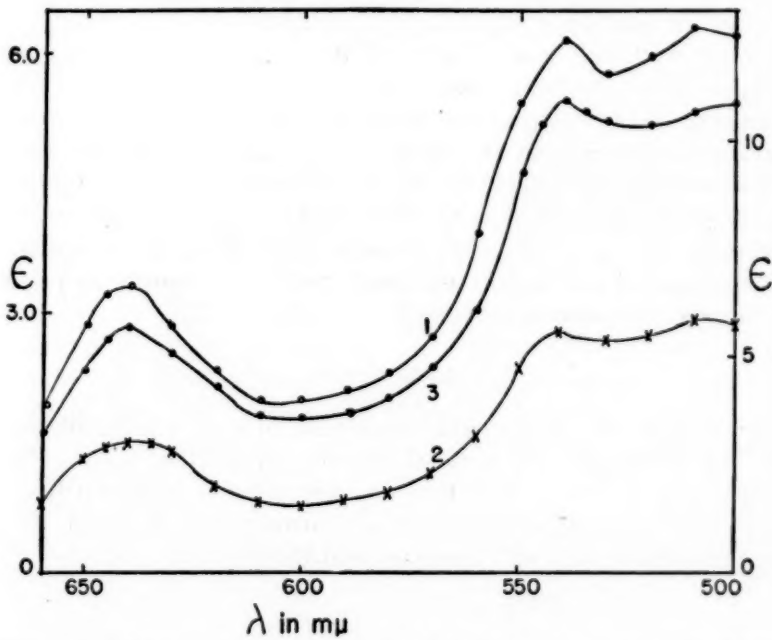


FIGURE 2.—Spectrophotometric curves of ferrihemic acid in acid acetone, 1 cm. cup. Curve 1, the total ferrihemic acid from 100 ml. of parasitized blood in 100 ml. acid acetone. Curve 2, the parasite pigment from the same volume of blood in 100 ml. acid acetone. Curve 5, the pigment from a 15 gm. parasitized spleen in 100 ml. of acid acetone. Read curves 1 and 2 against scale to the left and curve 3 against scale to the right.

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PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

November 30–December 27, 1941

The accompanying table summarizes the prevalence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State are published in the PUBLIC HEALTH REPORTS under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4-week period ended December 27, 1941, the number reported for the corresponding period in 1940, and the median number for the years 1936–40.

DISEASES ABOVE MEDIAN PREVALENCE

Influenza.—There were 11,034 cases of influenza reported for the 4 weeks ended December 27. Of the total number, Texas reported 5,242, South Carolina, 1,409, Virginia, 898, Arizona, 520, Arkansas, 462, and Oklahoma, 408 cases; more than 80 percent of the cases occurred in those 6 States. The incidence was only about one-tenth that reported for this period in 1940, but it was about one and one-half times the 1936–40 median figure for the corresponding period.

During the last 4 weeks of 1940 an epidemic of influenza was in progress, starting in the Mountain and Pacific regions and spreading into the Central and South Atlantic regions and later into the North Atlantic regions, reaching its peak during the week ended January 18, 1941, with a total of approximately 120,000 cases. For the past several weeks the current high incidence has been confined almost entirely to the States above mentioned, and in all regions except the South Atlantic and West South Central the incidence was below the average seasonal incidence.

Poliomyelitis.—The incidence of poliomyelitis remained unusually high in the New England, Middle Atlantic, East North Central, and East South Central regions. For the country as a whole the number of cases (251) was slightly lower than the figure for 1940, but it was about 25 percent above the average incidence for preceding years. Since the recent outbreak of poliomyelitis, which started in July in the East South Central region, did not reach the North Atlantic

regions until September, the decline would naturally come later there; but the current incidence in both North Atlantic regions was the highest recorded for this period since 1935, when there was a more severe epidemic in those regions. The West South Central, Mountain, and Pacific regions were unaffected by the recent rise of this disease and the incidence in those regions was slightly below normal for this period.

Number of reported cases of 9 communicable diseases in the United States during the 4-week period November 30-December 27, 1941, the number for the corresponding period in 1940, and the median number of cases reported for the corresponding period, 1936-40

Division	Current period	1940	5-year median	Current period	1940	5-year median	Current period	1940	5-year median
	Diphtheria			Influenza ¹			Measles ²		
United States.....	1,830	1,309	2,551	11,034	126,111	7,985	17,320	23,776	18,196
New England.....	34	17	40	12	50	26	1,919	1,435	1,435
Middle Atlantic.....	137	173	329	82	115	113	3,699	9,735	3,429
East North Central.....	260	205	459	310	1,854	494	1,259	7,626	1,836
West North Central.....	94	82	184	157	2,300	316	1,427	1,409	1,409
South Atlantic.....	516	321	633	2,638	3,981	2,607	3,133	922	962
East South Central.....	212	146	269	485	2,318	1,415	603	858	324
West South Central.....	425	304	401	6,124	33,612	2,940	1,463	535	385
Mountain.....	75	46	80	808	30,401	851	1,384	733	812
Pacific.....	77	75	140	418	51,471	466	2,433	523	523
	Meningococcus meningitis			Poliomyelitis			Scarlet fever		
United States.....	143	115	158	251	260	201	11,821	11,519	15,128
New England.....	19	9	9	25	1	1	1,250	858	858
Middle Atlantic.....	33	14	40	56	12	9	2,387	2,525	3,385
East North Central.....	16	16	20	32	110	23	3,351	3,722	5,524
West North Central.....	13	11	11	17	39	23	1,323	1,552	2,067
South Atlantic.....	21	31	25	26	39	22	1,297	1,148	1,168
East South Central.....	19	18	30	51	12	18	773	730	656
West South Central.....	13	15	15	20	14	21	388	362	725
Mountain.....	3	0	8	5	9	7	402	332	551
Pacific.....	6	11	11	19	24	24	650	490	1,103
	Smallpox			Typhoid and paratyphoid fever			Whooping cough ³		
United States.....	70	220	636	414	426	497	13,465	15,631	³ 15,238
New England.....	0	0	0	23	16	18	1,326	1,582	1,582
Middle Atlantic.....	0	0	0	63	74	74	3,801	4,425	4,425
East North Central.....	18	79	79	65	45	68	3,987	3,510	3,510
West North Central.....	24	107	226	14	26	37	541	1,203	465
South Atlantic.....	1	1	4	104	87	90	1,126	1,974	1,590
East South Central.....	6	0	2	31	48	39	401	587	381
West South Central.....	16	13	32	67	84	115	456	831	388
Mountain.....	2	9	111	13	26	33	685	393	393
Pacific.....	3	11	64	34	20	34	1,141	1,126	647

¹ Mississippi, New York, and Pennsylvania excluded; New York City included.

² Mississippi excluded.

³ Three-year (1938-40) median.

DISEASES BELOW MEDIAN PREVALENCE

Diphtheria.—The number of cases (1,830) of diphtheria reported for the 4 weeks ended December 27 was about 35 percent above the

incidence recorded for the corresponding period in 1940, but it was only about 72 percent of the 1936-40 median incidence for this period. Increases over last year were reported from the North Central, South Atlantic, and East South Central regions, but the West South Central region alone reported an excess over the normal seasonal incidence.

Measles.—The number of cases of measles rose from approximately 10,000 for the preceding 4-week period to approximately 17,000 for the current period. The incidence was, however, less than 75 percent of the incidence in 1940 and less than 90 percent of the preceding 5-year median number of cases for the corresponding period. In the East North Central region the incidence was slightly below normal and in the West North Central region the number of cases stood at about the average seasonal level, but all other regions reported a relatively high incidence.

Meningococcus meningitis.—The incidence of meningococcus meningitis (143 cases) was also higher than it was during the corresponding period in 1940, but lower than the 1936-40 average incidence (158 cases). Eleven of the 19 cases reported from the New England region occurred in Massachusetts, the incidence in that region being the highest on record for this period. In all other regions except the West North Central the number of cases was comparatively low.

Scarlet fever.—For the current period there were 11,821 cases of scarlet fever reported, as compared with 11,519, 14,672, and 15,128 for the corresponding period in 1940, 1939, and 1938, respectively. Very significant declines from the expected seasonal incidence were reported from the Middle Atlantic and North Central regions, with minor declines in the West South Central, Mountain, and Pacific regions. In the New England, South Atlantic, and East South Central regions the incidence was a little above normal.

Smallpox.—The number of cases of smallpox was also relatively low, 70 as compared with 220 in 1940 and an average of 636 cases for the corresponding period in the years 1936-40. The 6 cases reported from the West South Central region were the highest number recorded in that region since 1934, with the exception of the year 1937 when smallpox was unusually prevalent in the Central and Western States. For the country as a whole the current incidence is the lowest on record for this period.

Typhoid fever.—For the country as a whole the number of cases (414) of typhoid fever reported for the 4 weeks ended December 27 was the lowest in the 13 years for which these data are available. In the Pacific region the number of cases stood at the normal seasonal level, while the New England and South Atlantic regions reported a few more cases than might normally be expected; all other regions reported a relatively low incidence.

Whooping cough.—For the 4 weeks ended December 27 there were 13,465 cases of whooping cough reported, approximately 85 percent of the normal seasonal expectancy. The Atlantic coast regions reported declines from the 1938–40 median figures for this period, but all other regions reported a relatively high incidence, the East North Central and Pacific regions reporting the largest increases, with minor increases in the West North Central, South Central, and Mountain regions.

MORTALITY, ALL CAUSES

The average mortality rate from all causes in large cities for the 4 weeks ended December 27, based on data received from the Bureau of the Census, was 11.8 per 1,000 inhabitants (annual basis). The rate for the corresponding period in 1940 was 12.3 and the average rate for the years 1938–40 was 12.2. The current low rate is no doubt due, in part at least, to the absence of any widespread outbreak of influenza, the cases in the areas most affected apparently being quite mild.

DEATHS DURING WEEK ENDED JANUARY 3, 1942

[From the Weekly Mortality Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Jan. 3, 1942	Correspond- ing week, 1941
Data from 86 large cities of the United States:		
Total deaths.....	8,960	9,194
Average for 3 prior years.....	9,137	
Total deaths, 53 weeks.....	440,163	441,759
Deaths per 1,000 population, 53 weeks, annual rate.....	11.7	11.7
Deaths under 1 year of age.....	564	581
Average for 3 prior years.....	565	
Deaths under 1 year of age, 53 weeks.....	27,924	26,634
Data from industrial insurance companies:		
Policies in force.....	64,826,273	64,796,540
Number of death claims.....	10,639	10,108
Death claims per 1,000 policies in force, annual rate.....	8.6	8.2
Death claims per 1,000 policies, 53 weeks, annual rate.....	9.3	9.5

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED JANUARY 10, 1942

Summary

As compared with last week, slight increases were recorded for the current week in the incidence of diphtheria, influenza, measles, scarlet fever, and whooping cough, although each of the 9 diseases included in the following table and for which comparable figures are available, except measles, poliomyelitis, and whooping cough, was below the 5 year (1937-41) median.

A total of 3,800 cases of influenza was reported, as compared with 3,093 for the preceding week. Texas, with 1,520 cases, reported 40 percent of the total. For the corresponding week last year nearly 78,000 cases were reported. The 5-year median expectancy is 9,630 cases. The highest current incidence is in the South Atlantic and West South Central States.

Fourteen cases of amebic dysentery were reported (5 in Texas), 38 cases of bacillary (26 in Texas), and 17 cases of unspecified dysentery (16 in Virginia). Of 38 cases of tularemia, 10 were reported in Kentucky; and of 66 cases of endemic typhus fever, 20 were reported in Georgia, 9 each in Louisiana and Texas, and 8 in South Carolina. Twenty-eight cases of poliomyelitis were reported, as compared with 39 last week and a 5-year median of 21 cases.

Five cases of psittacosis were reported in Cleveland, Ohio, on January 14.¹

A large number of cases of eye infection were reported on the West Coast, stated to be among welders in shipyards. Investigations were being undertaken to determine the cause.

The crude death rate for 88 large cities in the United States for the current week is 13.6 per 1,000 population, as compared with 12.7 for the preceding week and a 3-year (1939-41) average of 13.4 for the corresponding week.

¹ See page 105.

Telegraphic morbidity reports from State health officers for the week ended January 10, 1942, and comparison with corresponding week of 1941 and 5-year median

In these tables a zero indicates a definite report while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1937-41	Week ended—		Median 1937-41	Week ended—		Median 1937-41	Week ended—		Median 1937-41
	Jan. 10, 1942	Jan. 4, 1941		Jan. 10, 1942	Jan. 4, 1941		Jan. 10, 1942	Jan. 4, 1941		Jan. 10, 1942	Jan. 4, 1941	
NEW ENG.												
Maine.....	1	0	2	1	40	13	174	37	74	1	2	0
New Hampshire.....	0	0	0				11	11	11	0	0	0
Vermont.....	1	0	0		99		7	24	24	1	0	0
Massachusetts.....	5	1	6				213	384	354	4	3	2
Rhode Island.....	0	0	0	1			38	0	1	0	0	0
Connecticut.....	0	0	2	7	10	10	110	12	143	2	0	1
MID. ATL.												
New York.....	16	15	24	18	177	144	493	1,471	375	7	3	5
New Jersey.....	7	9	17	18	20	20	134	582	437	3	1	1
Pennsylvania.....	23	16	37				1,121	1,457	83	2	5	2
E. NO. CEN.												
Ohio.....	12	7	28	26	56	7	95	479	37	1	0	4
Indiana.....	13	13	17	49	236	46	42	33	11	2	0	1
Illinois.....	41	25	32	18	34	22	89	975	45	0	0	3
Michigan.....	3	6	6	24	6		83	693	189	0	1	1
Wisconsin.....	1	0	2	31	64	62	273	369	359	2	0	0
W. NO. CEN.												
Minnesota.....	2	0	4	1	2	1	208	5	38	0	0	0
Iowa.....	11	18	4		43	2	90	132	51	1	0	1
Missouri.....	2	8	11	10	96	96	27	29	7	0	0	1
North Dakota.....	2	12	2	36	172	46	71	10	10	1	0	0
South Dakota.....	2	3	3			6	2	2	2	0	0	0
Nebraska.....	2	2	2	9	5	10	4	2	8	0	0	1
Kansas.....	6	3	6	9	2,453	238	186	112	101	2	0	2
SO. ATL.												
Delaware.....	1	1	2				1	17	6	0	0	0
Maryland.....	15	2	4	11	16	16	260	4	11	2	1	1
Dist. of Col.....	0	1	6	6	68	2	5	2	3	0	0	1
Virginia.....	29	13	22	346	1,752	454	155	146	112	1	1	2
West Virginia.....	7	8	11	16	430	66	232	61	28	0	0	0
North Carolina.....	27	13	43	6	17	24	639	69	69	1	0	2
South Carolina.....	7	11	13	474	1,581	909	82	33	16	0	0	1
Georgia.....	13	5	16	105	788	133	225	8	27	2	1	0
Florida.....	7	1	10	15	32	7	23	2	11	1	0	3
E. SO. CEN.												
Kentucky.....	6	4	13	2	9,601	56	26	191	191	0	1	2
Tennessee.....	11	4	12	72	613	147	40	25	25	0	2	3
Alabama.....	7	14	14	177	1,322	377	23	75	46	1	0	3
Mississippi.....	16	5	6							1	2	1
W. SO. CEN.												
Arkansas.....	4	12	12	192	6,516	283	73	16	16	0	0	1
Louisiana.....	13	9	12	7	3,235	42	13	2	3	0	1	1
Oklahoma.....	13	4	14	187	2,248	222	157	1	7	1	0	0
Texas.....	46	32	34	1,520	33,283	492	499	50	51	1	2	1
MOUNTAIN												
Montana.....	0	2	2	9	893	81	52	2	8	0	0	0
Idaho.....	0	0	0		58	4	1	0	53	0	0	0
Wyoming.....	0	0	0		1,651		14	0	4	0	0	0
Colorado.....	12	3	5	62	1,066	77	124	92	43	0	0	0
New Mexico.....	1	0	5	6	220	8	29	55	10	0	0	1
Arizona.....	1	2	8	195	1,099	178	87	52	6	0	2	2
Utah.....	0	1	0	9	2,344	7	48	13	48	1	0	0
Nevada.....	0				250		4			0		
PACIFIC												
Washington.....	0	0	1	2	1,122		31	18	32	2	0	0
Oregon.....	2	0	1	21	1,172	171	83	29	23	0	0	0
California.....	17	16	30	108	3,030	163	1,495	34	90	2	3	3
Total.....	405	301	639	3,800	77,820	9,630	7,892	7,816	6,670	45	31	60

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended January 10, 1942, and comparison with corresponding week of 1941 and 5-year median—
Continued

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Median 1937-41	Week ended—		Median 1937-41	Week ended—		Median 1937-41	Week ended—		Median 1937-41
	Jan. 10, 1942	Jan. 4, 1941		Jan. 10, 1942	Jan. 4, 1941		Jan. 10, 1942	Jan. 4, 1941		Jan. 10, 1942	Jan. 4, 1941	
NEW ENG.												
Maine.....	2	0	0	11	7	11	0	0	0	0	0	0
New Hampshire.....	1	0	0	11	3	4	0	0	0	0	0	0
Vermont.....	1	0	0	8	10	9	0	0	0	0	0	0
Massachusetts.....	1	0	0	303	120	142	0	0	0	2	1	1
Rhode Island.....	0	0	0	13	4	6	0	0	0	0	0	0
Connecticut.....	0	1	0	24	34	68	0	0	0	1	0	0
MID. ATL.												
New York.....	0	2	2	367	263	361	0	0	0	4	3	4
New Jersey.....	1	0	0	120	144	144	0	0	0	0	0	1
Pennsylvania.....	1	0	0	292	258	281	0	0	0	9	10	9
E. NO. CEN.												
Ohio.....	1	7	1	290	264	318	0	1	4	3	1	4
Indiana.....	1	2	0	70	103	187	2	0	15	2	1	1
Illinois.....	0	3	3	199	309	421	0	3	12	3	6	3
Michigan ¹	0	0	0	100	156	248	0	8	0	0	1	1
Wisconsin.....	0	0	1	145	118	181	0	5	5	0	1	1
W. NO. CEN.												
Minnesota.....	0	1	1	69	47	101	1	5	9	0	5	0
Iowa.....	1	1	0	24	45	94	0	1	16	0	1	1
Missouri.....	0	0	0	33	51	126	1	0	11	1	2	2
North Dakota.....	0	0	0	16	5	28	0	1	8	0	0	0
South Dakota.....	2	1	0	54	14	29	0	2	5	0	0	0
Nebraska.....	0	0	0	22	33	37	0	1	3	1	0	0
Kansas.....	0	0	0	84	67	167	0	0	7	0	0	2
SO. ATL.												
Delaware.....	0	0	6	40	12	14	0	0	0	1	0	0
Maryland ²	1	2	0	55	27	54	0	0	0	4	1	2
Dist. of Columbia.....	0	0	0	10	10	11	0	0	0	0	0	0
Virginia.....	0	3	0	32	46	54	0	0	0	8	1	2
West Virginia.....	1	2	0	62	48	60	0	0	0	0	3	2
North Carolina.....	0	0	0	102	50	52	0	0	0	2	1	1
South Carolina.....	1	0	0	13	17	10	0	0	0	8	0	4
Georgia.....	0	0	1	27	13	18	0	0	0	6	3	3
Florida.....	1	3	0	7	3	9	1	0	0	3	0	1
E. SO. CEN.												
Kentucky.....	0	2	1	60	45	63	0	0	0	2	0	1
Tennessee.....	1	0	0	48	37	38	1	0	0	0	1	1
Alabama.....	1	0	0	36	47	22	0	1	0	3	2	2
Mississippi ¹	1	0	0	20	10	11	0	0	0	0	0	1
W. SO. CEN.												
Arkansas.....	³ 1	0	0	7	11	18	0	0	2	1	1	1
Louisiana.....	0	0	1	9	5	18	0	0	0	3	12	11
Oklahoma.....	1	0	0	16	15	28	1	0	8	1	0	2
Texas.....	2	1	1	54	46	73	1	0	0	5	9	9
MOUNTAIN												
Montana.....	1	0	0	26	26	35	0	0	4	0	0	0
Idaho.....	0	0	0	5	5	14	0	0	7	1	0	0
Wyoming.....	0	0	0	5	1	9	0	0	0	0	0	0
Colorado.....	0	0	0	24	30	33	1	8	6	0	1	1
New Mexico.....	0	0	0	10	6	10	0	0	0	3	3	3
Arizona.....	0	0	0	7	5	5	0	0	0	0	0	2
Utah ²	0	0	0	21	7	18	0	0	0	0	0	0
Nevada.....	0			0			0			0		
PACIFIC												
Washington.....	0	2	1	52	29	48	0	0	5	1	0	1
Oregon.....	2	2	1	12	11	34	0	0	5	0	2	2
California.....	2	2	2	86	78	207	1	1	12	6	4	4
Total.....	28	37	21	3,101	2,695	4,459	10	37	276	84	76	98

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended January 10, 1942 and comparison with corresponding week of 1941 and 5-year median—Con.

Division and State	Whooping cough		Week ended January 10, 1942									
	Week ended—		An- thrax	Dysentery			En- ceph- alitis	Lep- rosy	Rocky Moun- tain spotted fever	Tula- remia	Ty- phus fever	
	Jan. 10, 1942	Jan. 4, 1941		Ame- ble	Bacil- lary	Un- spec- ified						
NEW ENG.												
Maine.....	29	50	0	0	0	0	0	0	0	0	0	
New Hampshire.....	30	5	0	0	0	0	0	0	0	0	0	
Vermont.....	33	15	0	0	0	0	0	0	0	0	0	
Massachusetts.....	265	260	0	0	0	0	0	0	0	0	0	
Rhode Island.....	61	11	0	0	0	0	0	0	0	0	0	
Connecticut.....	78	71	0	0	0	0	0	0	0	0	0	
MID. ATL.												
New York.....	665	375	0	2	7	0	1	0	0	0	2	
New Jersey.....	234	103	0	1	0	0	1	0	0	1	0	
Pennsylvania.....	283	524	1	2	0	0	0	0	0	0	0	
E. NO. CEN.												
Ohio.....	227	245	0	0	0	0	0	0	0	0	0	
Indiana.....	29	19	0	0	0	0	0	0	0	3	0	
Illinois.....	174	145	0	2	0	0	0	1	0	7	0	
Michigan ¹	166	198	0	0	1	0	0	0	0	0	0	
Wisconsin.....	207	98	0	0	0	0	0	0	0	0	0	
W. NO. CEN.												
Minnesota.....	34	39	0	0	0	0	1	0	0	0	0	
Iowa.....	11	9	0	0	0	0	0	0	0	1	0	
Missouri.....	17	17	0	0	0	0	0	0	0	0	0	
North Dakota.....	6	16	0	0	0	0	0	0	0	0	0	
South Dakota.....	12	1	0	0	0	0	0	0	0	0	0	
Nebraska.....	10	8	0	0	0	0	0	0	0	0	0	
Kansas.....	59	85	0	0	0	0	0	0	0	1	0	
SO. ATL.												
Delaware.....	0	14	0	0	0	0	0	0	0	0	0	
Maryland ¹	21	59	0	0	0	1	0	0	0	3	0	
Dist. of Col.....	38	13	0	0	0	0	0	0	0	2	0	
Virginia.....	46	106	0	0	0	16	0	0	0	3	0	
West Virginia.....	40	42	0	0	0	0	0	0	0	0	0	
North Carolina.....	295	192	0	0	0	0	0	0	0	2	6	
South Carolina.....	30	55	0	0	0	0	0	0	0	0	8	
Georgia.....	18	22	0	0	0	0	0	0	0	0	20	
Florida.....	24	6	0	0	1	0	0	0	0	0	1	
E. SO. CEN.												
Kentucky.....	75	22	0	0	0	0	0	0	0	10	0	
Tennessee.....	20	17	0	1	0	0	0	0	0	0	1	
Alabama.....	13	18	0	0	0	0	1	0	0	1	7	
Mississippi ²			0	0	0	0	0	0	0	2	3	
W. SO. CEN.												
Arkansas.....	3	10	0	1	0	0	0	0	0	0	0	
Louisiana.....	1	4	0	0	0	0	0	2	0	0	9	
Oklahoma.....	1	26	0	0	0	0	0	0	0	0	0	
Texas.....	81	232	0	5	25	0	1	0	0	0	9	
MOUNTAIN												
Montana.....	25	13	0	0	0	0	0	0	0	0	0	
Idaho.....	1	3	0	0	0	0	0	0	0	2	0	
Wyoming.....	16	8	0	0	0	0	0	0	0	0	0	
Colorado.....	27	23	0	0	0	0	0	0	0	0	0	
New Mexico.....	53	15	0	0	0	0	0	0	0	0	0	
Arizona.....	21	20	0	0	0	0	0	0	0	0	0	
Utah ³	44	32	0	0	0	0	0	0	0	0	0	
Nevada.....	4		0	0	0	0	0	0	0	0	0	
PACIFIC												
Washington.....	137	43	0	0	0	0	0	0	0	0	0	
Oregon.....	35	6	0	0	0	0	0	0	0	0	0	
California.....	165	154	0	0	3	0	1	0	0	0	0	
Total.....	3,864	3,449	1	14	38	17	6	3	0	38	65	

¹ New York City only.

² Period ended earlier than Saturday.

³ Corrected report for Arkansas, week ended Jan. 3, 1942: Diphtheria, 12; influenza, 93; measles, 77; meningitis, meningococcus, 3; poliomyelitis, 2.

WEEKLY REPORTS FROM CITIES

City reports for week ended December 27, 1941

This table lists the reports from 134 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland.....	0		0	0	3	7	0	0	1	1	26
New Hampshire:											
Concord.....	0		0	0	1	2	0	0	0	0	8
Nashua.....	0		0	0	0	0	0	0	0	4	8
Vermont:											
Barre.....	0			0		2	0		0	1	
Burlington.....	0		0	0	0	0	0	0	0	5	9
Rutland.....	0		0	0	0	0	0	0	0	0	2
Massachusetts:											
Boston.....	0		1	33	17	44	0	6	1	20	236
Fall River.....	1		0	1	0	28	0	0	0	0	27
Springfield.....	0		0	9	1	14	0	0	0	15	33
Worcester.....	0		0	1	5	9	0	0	0	10	42
Rhode Island:											
Pawtucket.....	1		0	12	1	0	0	0	0	0	8
Providence.....	1		0	7	6	7	0	1	0	11	72
Connecticut:											
Bridgeport.....	0		0	1	2	2	0	0	0	2	
Hartford.....	0		0	2	3	2	0	0	0	2	
New Haven.....	0		0	26	3	2	0	1	0	0	51
New York:											
Buffalo.....	0		0	0	4	16	0	8	0	2	123
New York.....	10	10	1	15	74	136	0	58	2	205	1,520
Rochester.....	0		0	1	1	7	0	1	0	5	66
Syracuse.....	0		0	1	1	4	0	0	0	21	54
New Jersey:											
Camden.....	4	1	1	2	3	1	0	0	0	3	21
Newark.....	0	8	0	19	6	21	0	1	0	32	105
Trenton.....	0	1	2	0	0	1	0	0	0	3	
Pennsylvania:											
Philadelphia.....	4	1	1	3	17	67	0	17	0	39	386
Pittsburgh.....	1		0	7	15	18	0	7	0	2	171
Reading.....	0		1	0	2	1	0	0	0	1	
Scranton.....	0			2		0	0		0	0	
Ohio:											
Cincinnati.....	0		0	0	1	13	0	5	0	6	120
Cleveland.....	4	11	0	2	10	30	0	13	0	26	197
Columbus.....	3	1	1	4	4	7	0	3	0	0	84
Toledo.....	0		0	1	3	12	0	4	0	12	60
Indiana:											
Anderson.....	0		0	0	0	0	0	0	0	3	10
Fort Wayne.....	0			0		1	0		0	0	
Indianapolis.....	4		0	6	12	18	0	6	0	14	112
Muncie.....	0		0	0	0	0	0	0	0	0	8
South Bend.....	0		0	0	0	2	0	0	0	0	20
Terre Haute.....	0		0	0	4	0	0	0	0	0	21
Illinois:											
Alton.....	1		0	0	0	0	0	0	0	1	7
Chicago.....	20	7	3	12	22	68	0	27	0	102	664
Elgin.....	0		0	0	1	0	0	0	0	2	11
Moline.....	0		0	0	0	2	0	0	0	6	11
Springfield.....	0		0	0	1	0	0	0	0	0	25
Michigan:											
Detroit.....	6	2	0	10	4	40	0	8	0	34	243
Flint.....	0		0	0	6	2	0	0	0	1	27
Grand Rapids.....	0		0	2	0	2	0	0	0	5	82
Wisconsin:											
Kenosha.....	0		0	0	1	0	0	0	0	0	20
Madison.....	0		0	1	0	1	0	1	0	6	14
Milwaukee.....	0		0	6	4	15	0	2	0	119	90
Racine.....	0			2		5	0		0	14	
Superior.....	0		0	1	0	3	0	0	0	8	10
Minnesota:											
Duluth.....	0		0	2	0	7	0	0	0	2	13
Minneapolis.....	0		1	1	4	8	0	1	0	0	77
St. Paul.....	0		0	45	2	3	0	0	0	15	56

City reports for week ended December 27, 1941—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Iowa:											
Cedar Rapids	0			0		0	0		0	0	
Davenport	0			0		3	0		0	0	
Des Moines	0		0	0	0	5	0	0	0	0	34
Sioux City	1			2		0	0		0	1	
Waterloo	0			0		0	0		0	2	
Missouri:											
Kansas City	0		2	3	4	7	0	2	0	0	92
St. Joseph	0		0	0	2	1	0	0	0	0	15
St. Louis	0	3	0	8	6	16	0	5	0	3	230
North Dakota:											
Fargo	0		0	0	1	0	0	0	0	1	7
Grand Forks	0			0		0	0		0	0	
Minot	0		0	46	0	0	0	0	0	0	7
South Dakota:											
Aberdeen	0			0		4	0		0	0	
Sioux Falls	0		0	0	0	0	0	0	0	0	14
Nebraska:											
Lincoln	0			1		2	0		0	0	
Omaha	0		1	0	3	3	0	2	0	0	44
Kansas:											
Lawrence	0		0	2	0	0	0	0	0	0	4
Topeka	0	1	0	1	0	6	0	0	0	9	23
Wichita	0	1		14	5	3	0		0	1	
Delaware:											
Wilmington	0	1	1	0	3	10	0		0	0	
Maryland:											
Baltimore	1	4	0	102	11	14	0	4	0	14	206
Cumberland	0		0	4	0	0	0	0	0	0	8
Frederick	0		0	0	0	0	0	0	0	0	4
Dist. of Col.:											
Washington	0		0	0	11	13	0	7	1	3	181
Virginia:											
Lynchburg	0		0	0	0	0	0	0	0	0	8
Norfolk	1		0	0	1	0	0	0	0	0	22
Richmond	0		1	0	1	7	0	0	0	0	54
Roanoke	0		0	0	0	0	0	0	0	0	21
West Virginia:											
Charleston	0	2	0	0	1	2	0	0	0	0	6
Huntington	1			0		0	0		0	0	
Wheeling	0		0	15	1	0	0	1	0	0	21
North Carolina:											
Gastonia	0			1		1	0		0	0	
Wilmington	0		0	37	0	0	0	0	0	0	8
Winston-Salem	1		0	9	1	0	0	1	0	0	13
South Carolina:											
Charleston	0	14		0	5	4	0		0	1	
Florence	0		0	0	0	0	0	0	0	0	2
Greenville	0		1	0	0	2	0	1	0	1	28
Georgia:											
Atlanta	1	2		0	3	5	0		0	0	
Brunswick	0		0	0	1	0	0	0	0	0	7
Savannah	0	4	0	25	0	1	0	0	0	1	26
Florida:											
Miami	0	3	2	0	0	0	0	3	0	0	46
St. Petersburg	0		0	0	2	1	0	0	0	0	19
Tampa	0		0	0	0	0	0	0	0	0	26
Kentucky:											
Ashland	0		0	0	0	0	0	0	0	3	6
Covington	0		0	0	1	0	0	3	0	0	20
Lexington	0		0	0	1	0	0	1	0	0	14
Louisville	0		0	1	9	19	0	2	1	19	65
Tennessee:											
Knoxville	2		0	3	1	4	0	1	0	0	21
Memphis	2		1	1	2	1	0	4	0	2	75
Nashville	0		2	0	1	1	0	0	0	3	52
Alabama:											
Birmingham	0	4	0	0	5	4	0	6	0	1	65
Mobile	0	1	0	0	2	2	0	0	0	0	25
Montgomery	2			1		1	0		0	0	
Arkansas:											
Fort Smith	1			3		0	0		0	0	
Little Rock	0	11	0	0	4	0	0	0	0	1	37
Louisiana:											
Lake Charles	0		0	1	4	0	0	0	0	0	8
New Orleans	0		1	0	11	2	0	8	0	0	150
Shreveport	0		0	0	5	0	0	1	1	1	34
Oklahoma:											
Oklahoma City	0	6	1	0	2	3	0	2	0	0	58
Tulsa	4		0	173	1	4	0	0	1	0	23

City reports for week ended December 27, 1941—Continued

State and city	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Tuber- culosis deaths	Ty- phoid fever cases	Whoop- ing cough cases	Deaths, all causes
		Cases	Deaths								
Texas:											
Dallas.....	1		0	3	1	1	0	0	0	1	44
Fort Worth.....	1		0	0	7	2	0	0	0	1	41
Galveston.....	0		0	0	0	0	0	1	0	0	7
Houston.....	3		0	2	9	0	0	5	0	0	81
San Antonio.....	1	11	6	0	7	0	0	7	0	0	84
Montana:											
Billings.....	0			0	1	2	0		0	0	
Great Falls.....	0		0	10	1	2	0	0	0	3	8
Helena.....	0		0	0	0	1	0	0	0	0	7
Missoula.....	0		0	0	0	1	0	0	0	0	4
Idaho:											
Boise.....	0		0	4	0	2	0	0	0	0	8
Colorado:											
Denver.....	5	27	0	21	8	0	0	0	0	6	72
Pueblo.....	0		0	130	3	5	0	0	0	0	10
New Mexico:											
Albuquerque.....	0		0	2	2	0	0	4	0	4	16
Arizona:											
Phoenix.....	2	40		3		1	0		0	3	
Utah:											
Salt Lake City.....	2		0	1	1	2	0	0	0	2	50
Washington:											
Seattle.....	0		1	0	6	4	0	3	0	34	107
Spokane.....	0		0	0	6	4	0	0	0	3	47
Tacoma.....	0			0	1	1	0		0	0	
Oregon:											
Portland.....	2	1	0	2	2	1	0	1	0	2	74
Salem.....	0	1		0		0	0		0	0	
California:											
Los Angeles.....	3	11	0	11	5	14	0	15	1	12	264
Sacramento.....	1		0	33	5	0	0	0	0	1	36
San Francisco.....	0	1	1	4	6	4	0	5	0	8	157

State and city	Meningitis, meningococcus		Polio- mye- litis cases	State and city	Meningitis, meningococcus		Polio- mye- litis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Minnesota:			
Worcester.....	1	0	0	Minneapolis.....	0	0	1
New York:				St. Paul.....	0	0	1
New York.....	4	2	2	Maryland:			
New Jersey:				Baltimore.....	1	0	0
Newark.....	1	0	0	District of Columbia:			
Pennsylvania:				Washington.....	1	0	0
Pittsburgh.....	1	0	1	Tennessee:			
Michigan:				Knoxville.....	0	0	1
Detroit.....	2	1	1	California:			
				Los Angeles.....	1	0	0

Encephalitis, epidemic or lethargic.—Cases: Missoula, 1. Deaths: New York, 1.

Pellagra.—Cases: Savannah, 4.

Typhus fever.—Cases: Savannah, 1; New Orleans, 1; Los Angeles, 1. Deaths: Savannah, 1.

Rates (annual basis) per 100,000 population for a group of 89 selected cities (population, 1940, 33,882,215)

Period	Diph- theria cases	Influenza		Meas- les cases	Pneu- monia deaths	Scar- let fever cases	Small- pox cases	Ty- phoid fever cases	Whoop- ing cough cases
		Cases	Deaths						
Week ended Dec. 27, 1941....	12.16	21.55	4.46	101.42	59.71	116.96	0.00	1.08	128.04
Average for week, 1936-40....	20.84	284.63	14.62	278.73	114.79	184.00	3.42	3.11	166.43

PLAGUE INFECTION IN FLEAS FROM GROUND SQUIRRELS IN SHASTA COUNTY, CALIF.

Under date of Dec. 31, 1941, report was received of plague infection proved, by animal inoculation and cultures, in a pool of 24 fleas from 3 golden mantled ground squirrels (identified as *C. douglasii*; probably *Citellus lateralis* sp.) shot Oct. 24 on property located 26 miles north of Redding, Shasta County, Calif.

PSITTACOSIS IN CLEVELAND, OHIO

On January 14, 1942, Dr. R. H. Markwith, State Director of Health of Ohio, reported the occurrence of 5 cases of psittacosis in Cleveland. Investigations were being conducted to determine the source of the infection, and appropriate control measures were being instituted.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended December 13, 1941.—During the week ended December 13, 1941, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Que- bec	On- tario	Mani- toba	Sas- katch- ewan	Al- berta	British Colum- bia	Total
Cerebrospinal meningitis.....	1	3	1	3	6					14
Chickenpox.....		14	2	227	497	118	79	39	116	1,092
Diphtheria.....		17		12	3	5			4	41
Dysentery.....				1						1
Influenza.....		11				31			22	64
Lethargic encephalitis.....					1				1	2
Measles.....			3	243	74	23	47	1	27	418
Mumps.....				446	293	59	163	11	154	1,126
Pneumonia.....		5			3	1	1		5	15
Poliomyelitis.....			5	1					2	8
Scarlet fever.....	7	21	10	100	216	27	18	33	11	443
Tuberculosis.....	3	3	6	40	51	2	33			138
Typhoid and paraty- phoid fever.....				7					3	10
Whooping cough.....		34		95	160	2	1	4	28	324

CUBA

Habana—Communicable diseases—4 weeks ended November 15, 1941.—During the 4 weeks ended November 15, 1941, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria.....	15		Measles.....	10	
Leprosy.....	4	1	Tuberculosis.....	6	
Malaria.....	22		Typhoid fever.....	26	3

Provinces—Notifiable diseases—4 weeks ended December 6, 1941.—During the 4 weeks ended December 6, 1941, cases of certain notifiable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana ¹	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer	2	1	3	5		5	16
Chickenpox				1			1
Diphtheria	1	19	3	3	1	4	31
Leprosy			2		1	1	4
Malaria	280	55	1	23	153	559	1,071
Measles		34	7				41
Hookworm disease		40				2	42
Scarlet fever		2					2
Trachoma				3			3
Tuberculosis	16	64	21	33	2	35	171
Typhoid fever	11	32	6	26	9	22	106
Yaws						56	56

¹ Includes the city of Habana.

FINLAND

Communicable diseases—October 1941.—During the month of October 1941, cases of certain communicable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Diphtheria	154	Poliomyelitis	3
Dysentery	2	Scarlet fever	203
Influenza	682	Typhoid fever	77
Paratyphoid fever	105		

JAMAICA

Communicable diseases—4 weeks ended December 20, 1941.—During the 4 weeks ended December 20, 1941, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox	4	10	Puerperal sepsis		1
Diphtheria	3	4	Scarlet fever	3	
Dysentery	1	3	Tuberculosis	30	74
Leprosy	1	2	Typhoid fever	6	48

PERU

Notifiable diseases—Year 1940.—During the year 1940, cases of certain notifiable diseases were reported in Peru as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	46	Plague	182
Diphtheria	689	Poliomyelitis	62
Dysentery	5,650	Scarlet fever	290
Influenza	40,695	Smallpox	455
Leprosy	23	Typhoid and paratyphoid fever	2,922
Lethargic encephalitis	8	Typhus fever	1,252
Malaria	44,162	Undulant fever	81
Measles	2,796	Whooping cough	17,041

SCOTLAND

Vital statistics—Quarter ended September 30, 1941.—Following are provisional vital statistics for Scotland for the quarter ended September 30, 1941:

	Num- ber	Rate per 1,000 popula- tion		Num- ber	Rate per 1,000 popula- tion
Marriages	13,076	10.1	Deaths from—Continued:		
Births	22,652	17.5	Homicide.....	7	-----
Deaths	14,464	11.6	Influenza.....	25	-----
Deaths under 1 year of age	1,424	¹ 63	Lethargic encephalitis.....	1	-----
Deaths from:			Measles.....	8	-----
Appendicitis.....	67	-----	Nephritis, acute and chronic.....	295	-----
Cancer.....	2,100	1.72	Pneumonia (all forms).....	438	.36
Cerebral hemorrhage and apoplexy.....	1,574	-----	Poliomyelitis.....	5	-----
Cerebrospinal fever.....	38	-----	Puerperal sepsis.....	41	-----
Cirrhosis of the liver.....	35	-----	Scarlet fever.....	4	-----
Diabetes mellitus.....	134	-----	Senility.....	436	-----
Diarrhea and enteritis (under 2 years of age).....	232	-----	Suicide.....	96	-----
Diphtheria.....	88	-----	Syphilis.....	61	-----
Dysentery.....	7	-----	Tetanus.....	2	-----
Erysipelas.....	4	-----	Tuberculosis (all forms).....	914	.73
Heart disease.....	3,196	-----	Typhoid and paratyphoid fever.....	8	-----
			Whooping cough.....	83	-----

¹ Per 1,000 live births.

NOTE.—All deaths in the above table are of civilians only.

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—Except in cases of unusual prevalence, only those places are included which had not previously reported any of the above-named diseases, except yellow fever, during the current year. All reports of yellow fever are published currently.

A cumulative table showing the reported prevalence of these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday of each month.

Smallpox

Guatemala.—During the month of November 1941, 1 case of small-pox was reported in Guatemala.

Yellow Fever

Colombia.—Yellow fever has been reported in Colombia as follows:
Antioquia Department—Remedios, Nov. 5, 1941, 1 death. In-
tendencia of Meta—San Martin, Nov. 12, 1 death; Villavicencio, Nov.
12, 1 death. Santander Department—San Vincente de Chucuri,
Nov. 10, 1 death.